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SKINNER LANDFILL

West Chester, Butler County, Ohio

Remedial Design

Contaminated Soils Design Investigation

November 6, 1995

Prepared by:

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SKINNER LANDFILL
REMEDIAL DESIGN

CONTAMINATED SOILS
DESIGN INVESTIGATION

WEST CHESTER, BUTLER COUNTY, OHIO

Rust Environment & Infrastructure Inc.
PROJECT NO. 72680.300

June 1, 1995

Rust Environment & Infrastructure Inc.
11785 Highway Drive, Suite 100
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Revision: 1

Skinner Landfill
Remedial Design

Contaminated Soils
Design Investigation

Prepared by: Rust Environment & Infrastructure Inc., 11785 Highway Dr., Suite 100, Cincinnati, Ohio 45241 on behalf of the Skinner Landfill PRP Group

Date: June 1, 1995

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1.0 INTRODUCTION

1.1 General

This report presents the results of the Contaminated Soils Design Investigation (CSDI) performed at the Skinner Landfill Superfund Site, West Chester, Butler County, Ohio. The CSDI was performed pursuant to the requirements of the Administrative Order on Consent (AOC) for Remedial Design for the Skinner Landfill Site between the United States Environmental Protection Agency (USEPA) and the Skinner Landfill PRP Group, dated March 29, 1994. The AOC and attachments present the selected remedial actions for the site and the requirements for design of the selected remedies. The CSDI was performed in general accordance with the approved Remedial Design Work Plan, dated August 25, 1994, and companion documents, Remedial Design Field Sampling Plan (FSP), Remedial Design Investigations Quality Assurance Project Plan (QAPjP), and Remedial Design Investigations Health and Safety Plan (HASP).

This report presents the scope, methods and findings of the field investigation program. The remainder of this section of the CSDI report presents descriptions and background information about the Skinner Landfill site. Section 2 describes the methods and procedures used to perform the CSDI including exploration procedures at the isolated areas and at the Northeast Corner. Section 3 of the report describes the subsurface materials encountered and the results of analytical testing in the isolated areas. Section 4 of the report describes the findings of the two-phase investigation to characterize the extent of waste materials and stained soils in the Northeast Corner of the property. Section 5 provides conclusions and design recommendations.

1.2 Site Description

The Skinner Landfill Site is located approximately 15 miles north of Cincinnati, Ohio near the City of West Chester, Butler County, Township 3, Section 22, Range 2. The site includes

approximately 78 acres and is bordered on the south by the East Fork of Mill Creek, on the north by wooded, inactive land, on the east by Consolidated Railroad Corporation (Conrail) right-of-way, and on the west by Skinner Creek.

The site is located in a highly dissected area that slopes from a till-mantled bedrock upland to a broad, flat-bottomed valley that is occupied by the main branch of Mill Creek. Elevations on the site range from a high of nearly 800 feet above mean sea level (MSL) in the northeast to a low of 645 feet near the confluence of Skinner Creek and the East Fork of Mill Creek. Both Skinner Creek and the East Fork of Mill Creek are small, shallow streams. Both of these streams flow to the southwest from the site toward the main branch of Mill Creek. A third on-site stream, Dump Creek, borders the former landfill on the east; this creek is intermittent and flows south into the East Fork of Mill Creek. Three shallow ponds are also located on the site.

In general, the site is underlain by relatively thin glacial drift over interbedded shales and limestones of the Ordovician age. The composition of glacial drift ranges from intermixed silt, sand and gravel, to silty, sandy clays. Its thickness ranges from zero to 80 ft on the site. The hills and ridges are comprised of the sand and gravel deposits which are encountered near the surface of the central portion of the site. The silts and clays usually occur as lenses in the sands and gravel or directly overlie bedrock. Clays occur at the surface in the far northeastern portion of the site and at the banks of the East Fork of Mill Creek and Skinner Creek.

Groundwater at the site is contained in either the glacial drift or the bedrock. The thickness, composition, and permeability of the glacial layers vary greatly over the site and greatly complicate the flow of groundwater on the site.

1.3 Site History

The property was originally developed as a sand and gravel mining operation, and was subsequently used as a landfill from 1934 to 1990. According to EPA studies, materials allegedly deposited at the site include demolition debris, household refuse and a wide variety of chemical wastes. The waste disposal areas include a now-buried waste lagoon near the center of the site and a landfill. According to EPA studies, the buried lagoon was used for the disposal of paint wastes, ink wastes, creosote, pesticides, and other chemical wastes. The landfill area, located north and northeast of the buried lagoon, received predominantly demolition and landscaping debris. Two buried pit areas have also been reported at the south-central portion of the site.

In 1976, the Ohio EPA initiated an investigation of the site in response to reports of a black oily liquid that was observed during a fire call to the site. Before the OEPA could complete the investigation, the landfill owners, the Skinners, covered the lagoon with a layer of demolition debris. Mr. Skinner dissuaded the OEPA from accessing the site by claiming that nerve gas, mustard gas and explosives were buried in the landfill. The OEPA requested the assistance of the U.S. Army after obtaining this information. Mr. Skinner later retracted his statements concerning buried ordnance, and a recent Army records review conducted in 1992 revealed no evidence of munitions disposal at the site.

In 1982 the site was placed on the National Priority List by the USEPA based on information obtained during a limited investigation of the site that indicated groundwater contamination as a result of the buried wastes. In 1986 a Phase I Remedial Investigation was conducted that included sampling of groundwater, surface water, and soil as well as a biological survey of the East Fork of Mill Creek and Skinner Creek. A Phase II Remedial Investigation was conducted from 1989 to 1991 and involved further investigation of groundwater, surface water, soils and sediments. The landfill Feasibility Study was completed in 1992.

The field investigations have revealed that the most contaminated media at the site is the soil from the buried waste lagoon. Lower levels of contamination were also found in soils on other portions of the site and in the groundwater, and very low levels were found in the sediments of East Fork of Mill Creek, Skinner Creek, and the Duck and Diving Ponds. Migration of the contaminants has been limited, and the Phase II RI concluded that there has been no off-site migration of contaminants via groundwater.

In accordance with the December 9, 1992 Administrative Consent Order for Interim Remedial Measures (IRM), groundwater samples are being obtained and analyzed quarterly. In addition, a fence was installed around the Skinner landfill site. The fence and groundwater monitoring wells are inspected for integrity on a continuing basis. As a result of the inspections, the fence has been repaired twice to date and one groundwater monitoring well was abandoned and replaced.

1.4 Purpose of Investigation

The Remedial Investigation (RI) identified two types of potentially contaminated areas outside the main landfill: 1) four isolated contaminated soil areas (isolated areas), and 2) the Northeast Corner. These areas are shown on Figure 1, General Location Map. The four isolated areas, which were expected to be of limited areal extent, include the areas around the Buried Pit soil borings BP01 and BP02, the area around well GW-29, and the area around well GW-38. The exact limits of contaminated soils in these areas were not determined in the RI. The second area of potentially contaminated soil and waste disposal is the Northeast Corner of the site adjacent to the existing landfill. This area was not investigated during either phase of the RI based on the findings of the Initial Site Evaluation Report.

The CSDI has two components. The first component addresses the four isolated areas. The purpose of this work is to determine the extent of the contaminated material in each of the four

isolated areas and characterize the contaminants with respect to the requirements of the AOC and attachments. The second component of the CSDI is to assess the presence of buried materials, if any, in the Northeast Corner of the site.

2.0 INVESTIGATION METHODOLOGY

2.1 Isolated Areas

A full description of the scope of work and methods used to investigate the four isolated areas is provided in Section 2.1 of the FSP. In general, three soil samples were obtained to a depth of 7.5 ft below existing grades at three sample locations around a Phase II RI soil boring in each of the four isolated areas as shown on Figure 2, Soil Sample Location Map. The soil samples were analyzed for polynuclear aromatic hydrocarbons (PAHs), polychlorinated byphenols (PCBs) and lead for comparison with the remedial response levels (RRLs) shown on Table 2 of the ROD/SOW.

There were no deviations from the methods required in the FSP; however, some modification of the boring locations was needed due to physical terrain constraints and/or subsurface conditions. The B-56 location was sampled using a test pit excavated with a trackhoe, since the area could not be sampled with a drill rig. Auger refusal was encountered with the drill rig in the area of B-56 at six locations. Cobbles encountered during excavation of the test pit probably caused the auger refusal condition.

The FSP allowed for modification of the field investigation based on observations made during the drilling program. Since soil staining was not observed and screening instruments did not indicate the presence of contamination during sampling, no modification to the investigation was made.

2.2 Northeast Corner

A full description of the scope of work and methods used to investigate the Northeast Corner is provided in Section 2.2 of the FSP and is also discussed in Technical Memorandum #1 (TM#1). In general, the work was performed in two phases. Phase I included review of aerial photographs and an electromagnetic (EM) survey to identify subsurface anomolies within the Northeast Corner area. The EM survey was conducted over a 5-acre area with readings obtained every 50 ft in both directions as shown on Figure 3, Northeast Corner Grid Location Map. At each point on the grid, a quadrature and in-phase reading was obtained using a Geonics EM31 meter. This resulted in a measurement at each point of total subsurface conductivity and relative magnetic response.

Based on the Phase I results, Phase II included excavation of test pits to further define the limit of buried waste defined by the anomolies. Eight test pits spaced about every 100 ft along the estimated limit of waste were used to confirm the landfill configuration in the Northeast Corner (see Figure 4). Furthermore, anomolies found which were not contiguous to the landfill were sampled and tested. There were no deviations from the methods required in the FSP.

3.0 ISOLATED AREAS INVESTIGATION RESULTS

3.1 Subsurface Conditions

The field sampling locations are provided on Figure 2, Soil Sample Location Map. A record of materials encountered at each boring or test pit location is shown on the logs provided in Appendix I. Each boring log shows the type, depth, and elevation of material encountered, sample depth and identification number (ID), recovery, flame ionization detection (FID) reading and standard blow count.

In general, the eleven borings and one test pit encountered brown sandy lean clay to the maximum depth explored (7.5 ft below the existing grades). Several borings encountered sand and gravel and some minor fill material. Subsurface materials encountered in this study were consistent with those encountered in the Phase II RI at each of the four isolated areas. No groundwater was encountered in any of the borings.

The two isolated areas at the Buried Pit are around the Phase II RI soil borings BP-01 and BP-02. Borings B-50, B-51 and B-52 were advanced near the BP-02 location and encountered brown sandy lean clay to a depth of 7.5 ft except at Boring B-50 where brown clayey sand was found from 3.5 ft to 7.5 ft.

Borings B-53, B-54 and B-55 were advanced near the BP-01 location and encountered brown clayey sand with gravel to a depth of 7.5 ft except at Boring B-53 where brown and black sand was found from 0 to 3 ft and silty clay was found from 3 ft to 7.5 ft. The brown and black sand layer is possible fill material although no other deleterious materials such as wood or brick fragments were observed. Fill material had been encountered from 0 to 5 ft in Boring BP-01.

Borings B-56, B-57 and B-58 were advanced near the GW-29 location and encountered brown silt and sand with gravel to a depth of 7.5 ft except at Boring B-58 where brown silty clay with gravel was found from 0 to 3.5 ft below grade. It should be noted that six attempts were required to advance Boring B-56, with auger refusal occurring in the upper 2 ft of soil. This area was subsequently explored using a trackhoe. The auger refusal condition was apparently caused by cobbles or limestone floaters in the soil.

Borings B-80, B-81 and B-82 were advanced near the GW-38 location and encountered brown sandy silty clay to a depth of 7.5 ft except at Boring B-80 where clayey sandy gravel fill was found from the ground surface to 7.5 ft.

3.2 Soil Analytical Results

As required by the FSP, soil samples were obtained at each boring at depth intervals of 0.5 to 2.0 ft, 3.5 to 5.0 ft and 6.0 to 7.5 ft. All of the resulting 36 soil samples were tested for PCBs, PAHs and lead. A summary of the soil analytical results from the CSDI and Phase II RI is provided on Table 1. Also shown on Table 1 are the target contaminants for soil and remedial response levels (RRLs) as defined in the AOC (Table 2 in the ROD/SOW). The analytical report is provided in Appendix II, with the data validation documentation in Appendix VI.

All data met validation criteria except for PCB results on 19 of 36 samples and PAH results on all Boring B-58 samples. Nineteen of the PCB results were rejected and are unusable due to extremely low surrogate recoveries. A surrogate is a compound which is added to every sample and is not expected to appear in the results, but is close to some expected compound in retention time. This quality control operation tests the fact that compounds are being recovered from every sample analyzed. The recoveries of the surrogate compound should fall within percentages specified by the EPA in order for the results to be acceptable as a valid test. The extremely low surrogate recoveries for the 19 rejected PCB results were outside EPA specifications and appear to be associated with the sample extraction procedures.

Based on the accepted PCB analytical results, no resampling and retesting of PCBs are required in the areas of BP01, BP02 and GW-29. Resampling and retesting for PCBs in the area of GW-38 was conducted with the results presented in Appendix III. PCBs were not detected in soil samples from the resampling event. The PAH results from Boring B-58 samples are not rejected, but qualified as estimated values due to low surrogate recoveries and matrix interference.

PCBs were not detected in any of the soil samples. Lead was detected in all soil samples at concentrations below the RRLs except for the sample from 0.5 to 2.0 ft at B-55 which contained 845 ppm lead (Lead RRL is 500 ppm). PAHs were detected above the RRLs in 21 of the 36

samples (58% of the samples). Soil samples from area GW-29 contained no detectable PAH compounds.

The following is a discussion of the results of PAH concentrations at the other three isolated areas. PAH results were estimated in some cases and these results are qualified using a J as shown on Table 1. The J qualifier is used when estimating a concentration for tentatively identified compounds. The estimation process is used when the mass spectral data indicates the presence of a compound that meets the identification criteria, but the result is less than the sample quantitation limit and greater than zero.

Soil samples from Area BP02 had the highest PAH concentrations and greatest frequency of detection. Benzo(a)pyrene exceeded the RRL in every sample, and the remaining PAHs exceeded the RRLs in all, but two samples. Concentrations of benzo(a)pyrene ranged from 0.14 to 3 mg/kg compared with a RRL of 0.10 mg/kg, and concentrations for the other PAHs ranged from 0.14 to 5.7 mg/kg compared to RRLs of 0.33 mg/kg. PAH concentrations generally decreased with depth, but the samples from 6.0 to 7.5 ft. had PAH concentrations above the RRLs in two of the three borings. Of the 45 reported concentrations (9 samples times 5 PAH parameters), 20 were estimated (J-qualified) values.

Soil samples from Area BP01 also had elevated PAH concentrations and a high detection frequency, but to a lesser extent than at BP02. Benzo(a)pyrene exceeded the RRL in all but two samples, and the remaining PAHs exceeded the RRLs in about half of the samples. Concentrations of benzo(a)pyrene ranged from 0.077 to 1.4 mg/kg and concentrations of the other PAHs ranged from 0.083 to 2.9 mg/kg. PAH concentrations generally decreased with depth, but the samples from 6.0 to 7.5 ft had PAH concentrations above the RRLs in two of the three borings. Forty-four of the 45 reported concentrations were estimated (J-qualified) values.

Soil samples from Area GW-38 had slightly to moderately elevated PAH concentrations and a moderate detection frequency. Benzo(a)pyrene exceeded the RRL in about half of the samples, and the remaining PAHs exceeded the RRLs in one-half to one-third of the samples. Concentration of benzo(a)pyrene ranged from non-detect to 1.4 mg/kg and concentrations of the other PAHs ranged from 0.038 to 2.5 mg/kg. Thirty-nine of the 45 reported concentrations were estimated (J-qualified) values.

4.0 NORTHEAST CORNER INVESTIGATION RESULTS

4.1 Phase I Results

As previously noted, the Skinner ROD/SOW required a limited investigation in the Northeast Corner of the site to identify the type and extent of buried materials, if any. For Phase I of this investigation, aerial photographs were reviewed and an electromagnetic (EM) survey was performed to identify anomolies which may represent buried waste. The results of this work were presented in Technical Memorandum #1 (TM#1) and Addendum #1 which are provided in Appendix IV.

The average subsurface conductivity across the entire Northeast Corner was found to be 21 millimhos/meter (mm/m). Anomolous readings occurred within the proposed limits of waste as shown on Figure 4 of up to 51 mm/m. Anomolies identified from the relative response from metallic objects were limited to this same area. The Phase I work indicated that buried waste is present only in the southwest area of the Northeast Corner and that stained soils and/or surficial "wastes" are present in two non-contiguous areas to the southeast.

4.2 Phase II Results

4.2.1 Limits of Waste Confirmation

Phase II of the Northeast Corner investigation included test pits to confirm the estimated extent of buried waste, and soil sampling to characterize the chemicals present in the non-contiguous areas. Eight test pits were excavated along the estimated edge of buried waste in accordance with procedures described in the FSP. After each test pit was excavated, wooden lathes were placed at the edge of waste as determined by visual observations. The type of waste encountered appeared to consist mostly of household waste such as plastic, glass and aluminum or tin cans. Some demolition debris such as tires, wood and bricks were also found. A white silt was encountered at test pits 32 and 33. The lathe locations were then surveyed and plotted on a map of the Northeast Corner. The lathe locations are presented on Figure 7, Northeast Corner Limit of Waste.

4.2.2 Non-Contiguous Area Sampling

Samples NC01 and NC02 were obtained from the non-contiguous areas and were tested for the entire CLP target compound list. Both samples were similar in description and consisted of a moist white silt. The results of the analysis is presented in Appendix V with the associated data validation documentation provided in Appendix VI. The only VOCs detected were toluene, methylene chloride and acetone. All of these detections were below the contract required detection limit. These compounds are common laboratory artifacts. No PAHs, PCBs or pesticides were detected. Sample results for inorganic testing indicate that both soil samples have high levels of calcium, magnesium, iron and potassium. Lead was detected in both samples below the RRL.

5.0 CONCLUSIONS AND RECOMMENDATIONS

5.1 Isolated Areas

As indicated in the RD Work Plan, the purpose of this part of the CSDI was to define horizontal and vertical limits of contaminated soil at the isolated areas, characterize the contamination, estimate the volume of contaminated soil in each area, and provide recommendations for excavation and relocation of the soil to the landfill.

Area GW-29 will not require excavation because no contamination exceeding the RRLs was found at the original GW-29 location or at Borings B-56, B-57 and B-58. Contamination was detected at Areas BP-01, BP-02 and GW-38 with the estimated limits delineated as described below. Areas BP-01 and BP-02 were combined into a single isolated area.

Horizontal extent of contamination at the isolated areas was estimated by using the Phase II RI and CSDI borings which encountered contamination. The horizontal limit surrounding each contaminated boring was estimated by extending a distance radially from each boring where contamination was detected. The radial distance was determined by using half the distance from a boring where contamination was encountered to a boring where contamination was not encountered. At Areas BP-01 and BP-02, the contaminated/non-contaminated borings are BP-01 and B-54. At Area GW-38 the contaminated/non-contaminated borings are GW-38 and B-81.

The individual contaminated areas were then consolidated into a single area. Maximum extent of vertical contamination was estimated at 7.5 ft since contamination was found to end before a depth of 7.5 ft in at least one boring location at each isolated area. The estimated limit of contamination for each of the isolated areas is shown on Figures 5 and 6. The contamination is from PAHs, with one surface sample at Area BP01 having a lead concentration above the RRL. No PCBs were detected.

Figures 5 and 6 also show the approximate limit of excavation at each isolated area. The approximate limit of excavation was determined by placing an excavation line at a depth of 10 ft parallel to the long axis of the estimated limits of contamination. The excavation plane then proceeds upward at a 1:1 slope to the ground surface. This configuration will provide removal of soils beyond a depth of 7.5 ft and increase the areal extent of removal since the higher concentrations of PAHs were detected near the surface. This configuration will also provide more stable excavated slopes during remedial construction. A comparison of the estimated contaminated soil volume to the estimated excavation volume for each isolated area is provided on Table 2. The calculations for the volume estimates are provided in Appendix VII.

The excavations will be conducted in accordance with the Performance Monitoring Plan. The open excavation will then be backfilled with granular or cohesive soils meeting classification requirements of the USCS system for sand (SW, SP), lean clay (CL) or silty clay (CL-ML) soils. The backfill should be placed in maximum 12-inch-thick lifts, however, no moisture control or minimum density should be required unless permanent structures are planned for the backfilled area.

Due to the excavation, it will be necessary to abandon existing groundwater monitoring well GW-38 prior to remedial activities. Existing groundwater wells GW-06 and GW-07R are not expected to be affected by the excavation.

5.2 Northeast Corner

As indicated in the RD Work Plan, the purpose of this part of the CSDI was to evaluate the presence and extent of buried materials in the Northeast Corner and to characterize any waste materials not contiguous to the landfill.

5.2.1 Limits of Waste

Based on review of aerial photographs, performance of a geophysical survey and excavation of test pits, Rust has determined that the only buried waste in the Northeast Corner is contiguous to the landfill.

The final limit of waste as determined by this study is shown on Figure 7. The areal limits of waste in the Northeast corner shown on Figure 7 are based on the results of the eight test pits excavated for the Phase II portion of this study. Rust recommends that the landfill cap be extended to cover these materials. The proposed landfill cap design configuration will be based on this newly identified limit of waste in the Northeast Corner.

5.2.2 Non-Contiguous Areas

The white silt materials sampled at the two small, non-contiguous areas appears to be similar based on visual observations and analytical results. No remedial response levels for soil contaminants were exceeded in these two areas. The very low (estimated) concentrations of volatile organic compounds detected appear to be laboratory artifacts. The inorganic analysis results showed relatively high concentrations of inert compounds associated with lime sludge. As noted in TM#1, lime sludge from water treatment plants was reported to have been deposited at the Northeast Corner. Based on these observations, Rust recommends that the non-contiguous areas be left in place and not incorporated into the existing landfill.

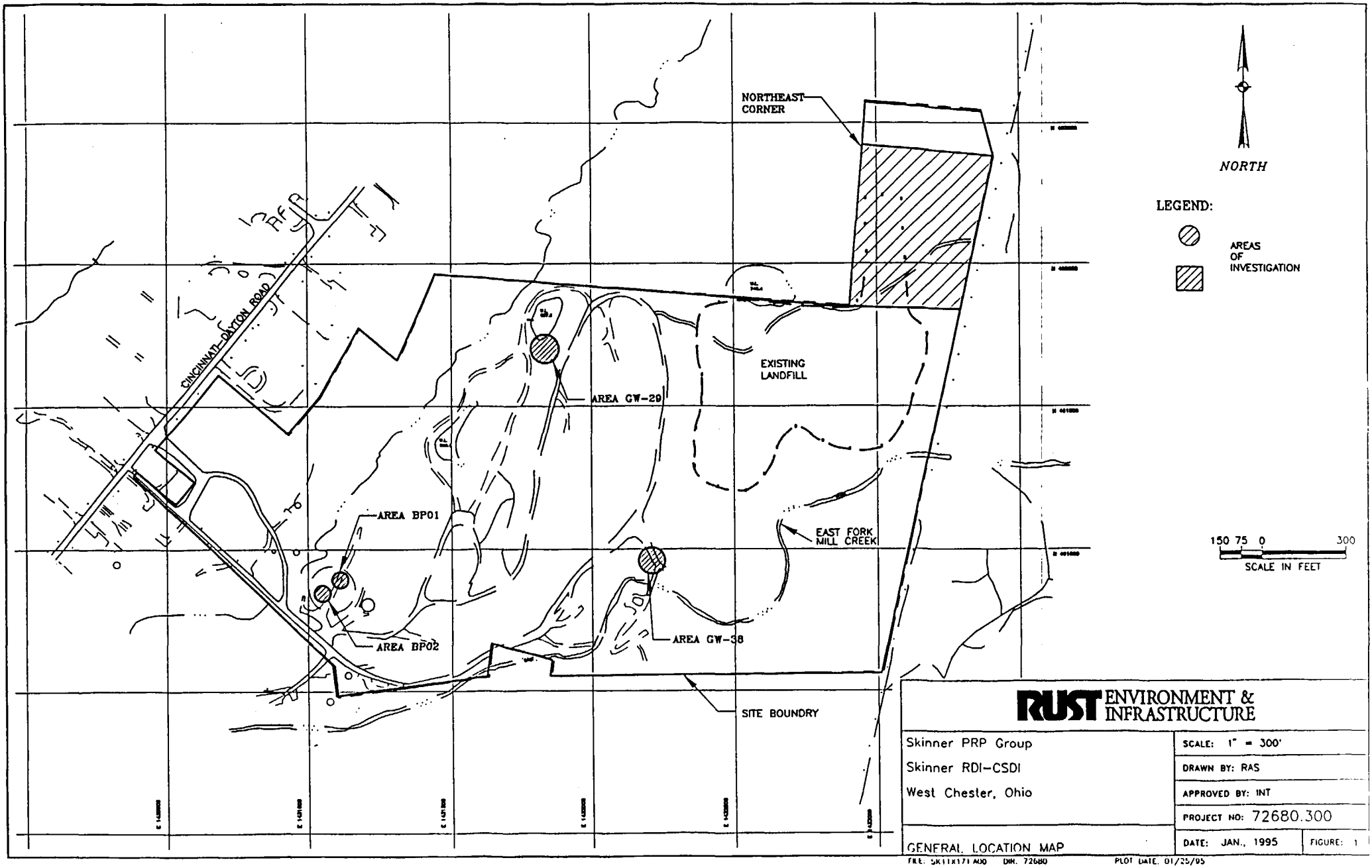
TABLE 2

VOLUME ESTIMATES

Isolated Area	Estimated Contaminated Soil Volume (C.Y.)	Estimated Excavation Volume (C.Y.)
BP-01/BP-02	50	500
GW-29	0	0
GW-38	60	200

Figures

FIGURES



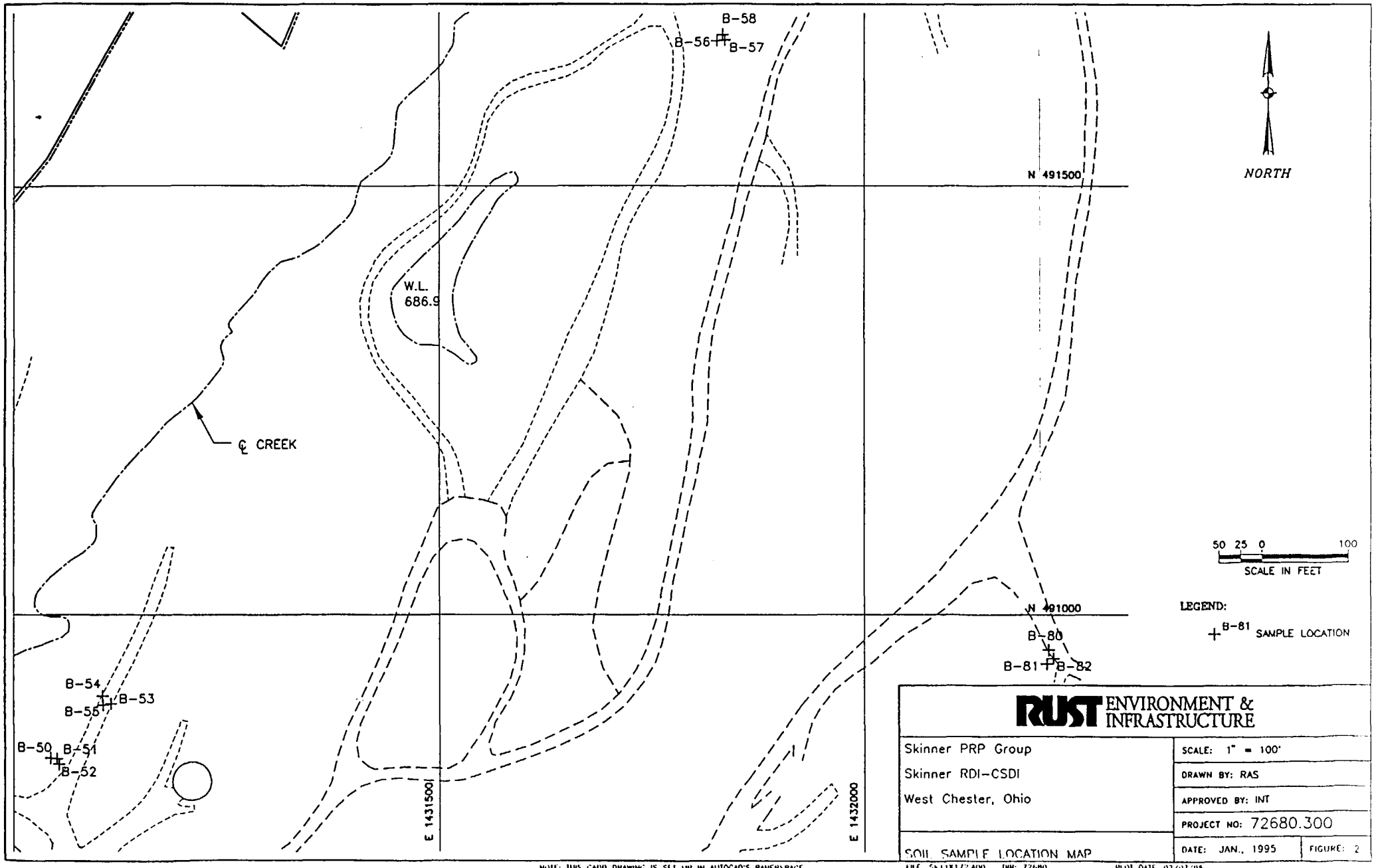
RUST ENVIRONMENT & INFRASTRUCTURE

Skinner PRP Group
Skinner RDI-CSDI
West Chester, Ohio

GENERAL LOCATION MAP

SCALE: 1" = 300'
DRAWN BY: RAS
APPROVED BY: INT
PROJECT NO: 72680.300
DATE: JAN., 1995
FIGURE: 1

FILE: SK11X17.A00 DIR: 72680 PLOT DATE: 01/25/95



RUST ENVIRONMENT & INFRASTRUCTURE

Skinner PRP Group	SCALE: 1" = 100'
Skinner RDI-CSDI	DRAWN BY: RAS
West Chester, Ohio	APPROVED BY: INT
	PROJECT NO: 72680.300
SOIL SAMPLE LOCATION MAP	DATE: JAN., 1995 FIGURE: 2

NOTE: THIS CADD DRAWING IS SET UP IN AUTOCAD'S PAPERSPACE ALTERATIONS MAY BE NECESSARY FOR FILE TRANSLATION TO OTHER CADD PROGRAMS

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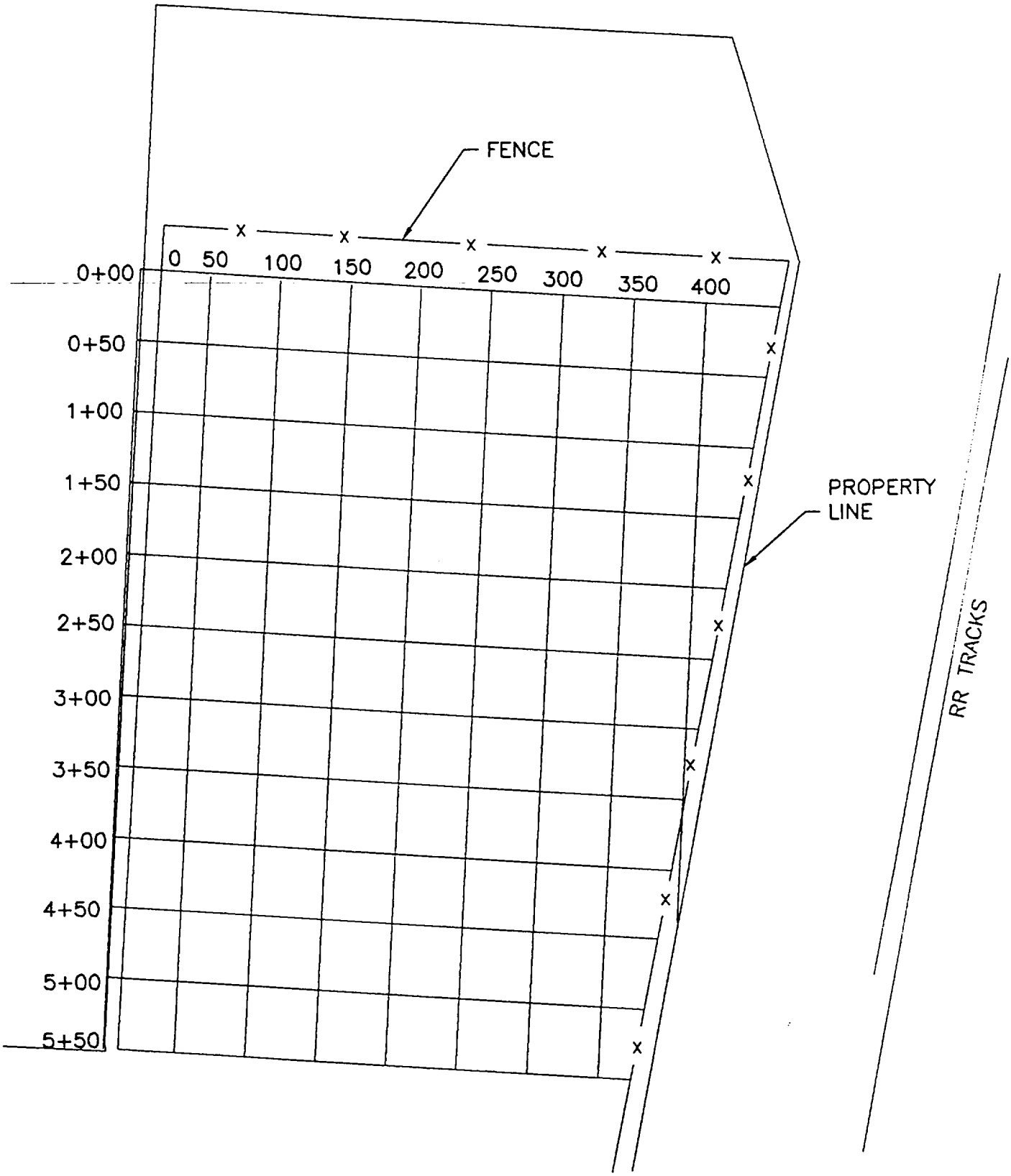

Skinner PRP Group

Skinner RDI-CSDI

West Chester, Ohio

NORTHEAST CORNER-SURVEY GRID MAP

RUST ENVIRONMENT & INFRASTRUCTURE

PROJECT NO. 72680.300 FIGURE 3

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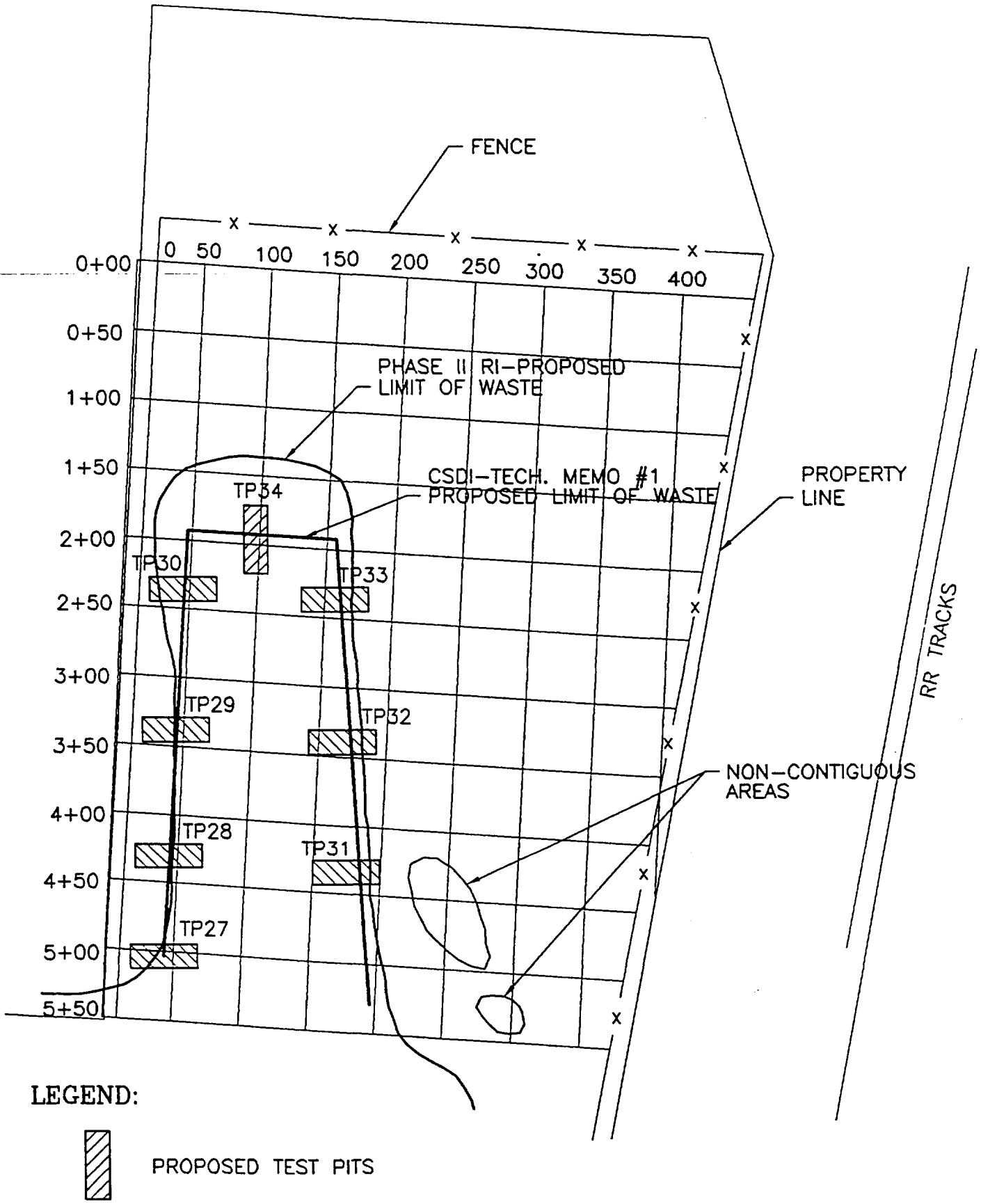

Skinner PRP Group

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West Chester, Ohio

NORTHEAST CORNER–TEST PIT LOCATION PLAN

RUST ENVIRONMENT & INFRASTRUCTURE

PROJECT NO. 72680.300 FIGURE 4

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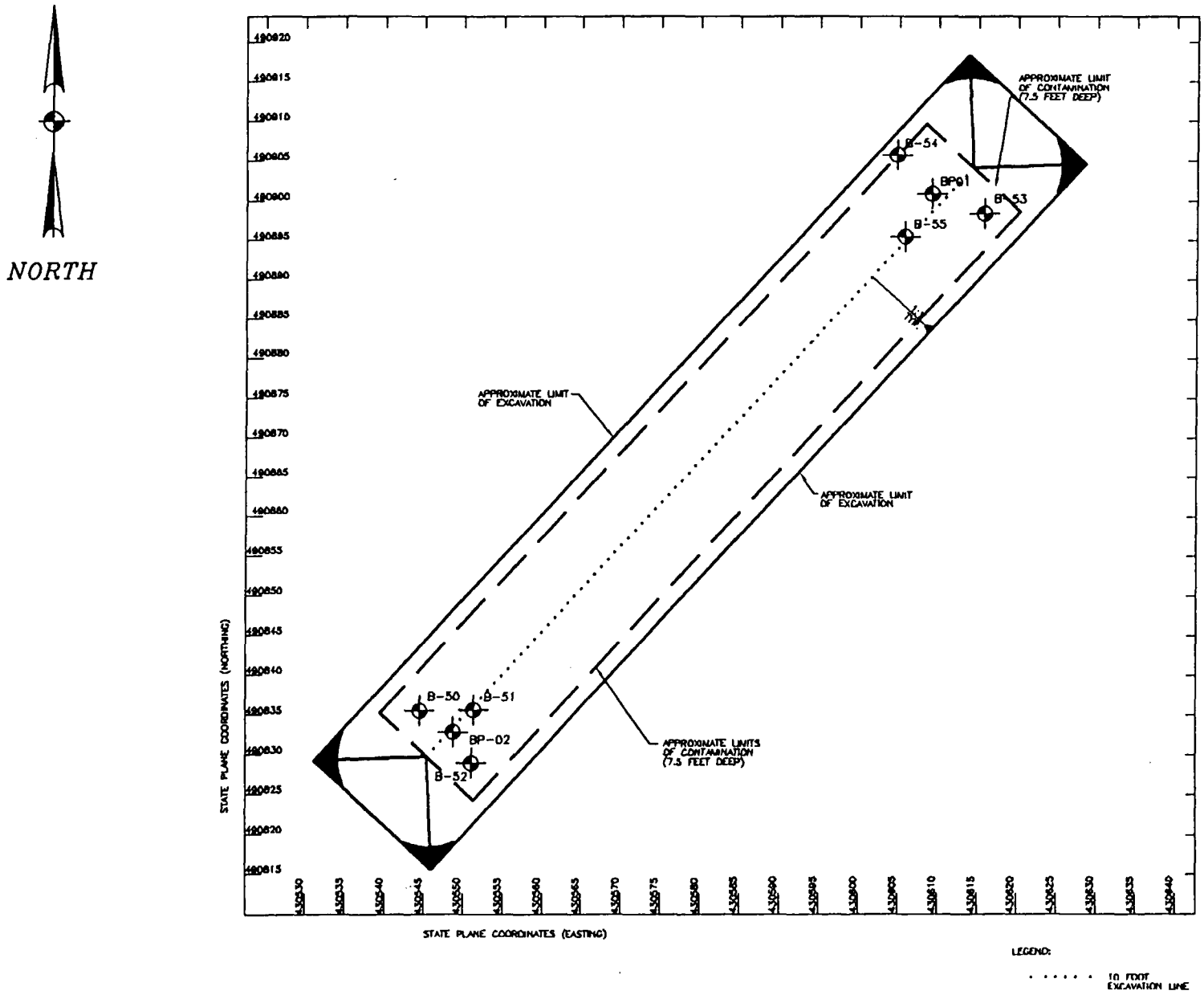

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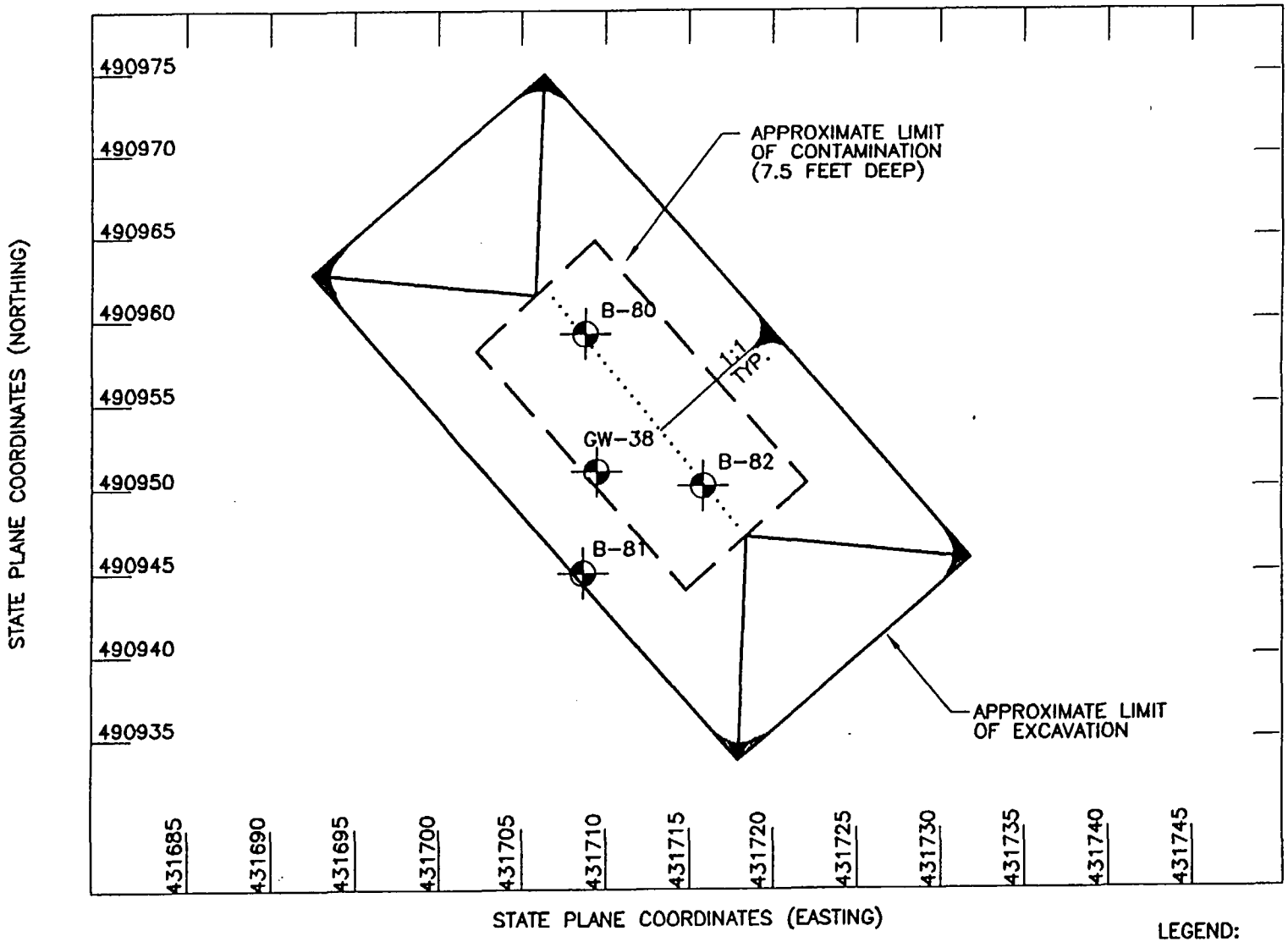
West Chester, Ohio

CONTAMINATED SOIL LIMITS- AREA BP01/BP02

RUST ENVIRONMENT & INFRASTRUCTURE

PROJECT NO. 72680.300 FIGURE 5

FILE: SKBP05.A** DIR: 72680 PLOT DATE: 05/25/95



NORTH

LEGEND:

..... 10 FOOT EXCAVATION LINE

5 2.5 0 10

SCALE IN FEET

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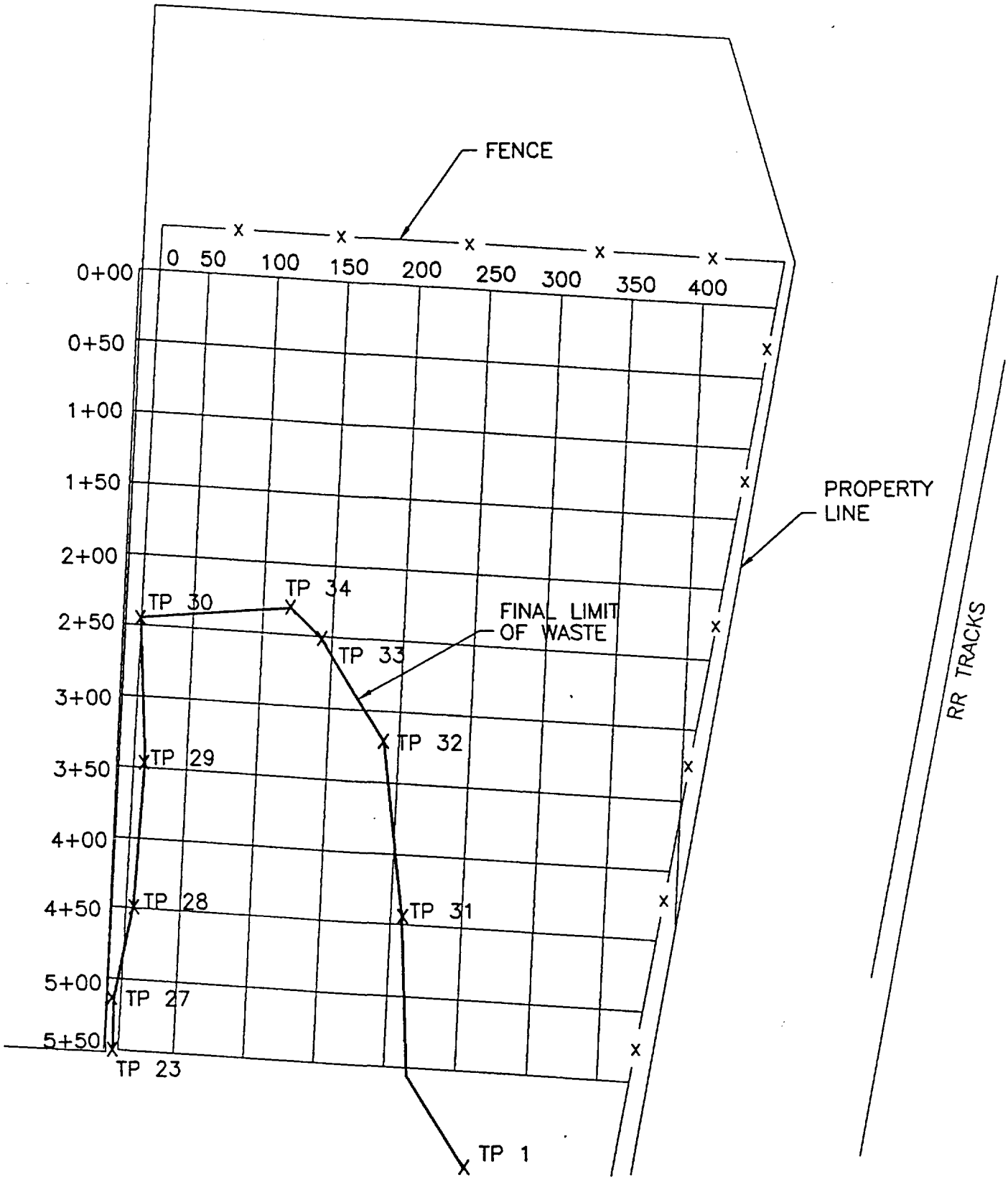
West Chester, Ohio

CONTAMINATED SOIL LIMITS-AREA GW-38

RUST ENVIRONMENT & INFRASTRUCTURE

PROJECT NO. 72680.300 FIGURE 6

FILE: SKBP38 DIR: 72680 PLOT DATE: 01/31/95



X TP 34 = LATHE LOCATION

Skinner PRP Group

Skinner RDI–CSDI

West Chester, Ohio

NORTHEAST CORNER LIMIT OF WASTE

RUST ENVIRONMENT & INFRASTRUCTURE

PROJECT NO. 72680.300 FIGURE 7

FILE: SKUMWAS.A00 DIR: 72680 PLOT DATE: 01/25/95

Tables

TABLES

TABLE 1

SUMMARY OF SOIL ANALYTICAL RESULTS
(mg/kg)

CSDI STUDY

Isolated Area	Boring No.	Sample No.	Depth ft.	Target Contaminants: Polychlorinated Biphenyls	Benzo(a) anthracene	Benzo(a) pyrene	Benzo(b) fluoranthene	Benzo(k) fluoranthene	Chrysene	Lead
BP 02	B-50	01	0.5 - 2.0	ND, R	2.3	J 1.4	J 1.6	J 1.3	2.8	25.7
		02	3.5 - 5.0	ND	4.6	3	3.4	2.4	5.7	31.9
		03	6.0 - 7.5	ND, R *	1.7	1	1.2	0.85	2.1	55.2
	B-51	01	0.5 - 2.0	ND, R	0.94	0.59	0.66	0.58	1.2	16.1
		02	3.5 - 5.0	ND, R	1.4	0.8	0.78	0.61	1.4	30.5
		03	6.0 - 7.5	ND, R	J 0.26	J 0.14	J 0.16	J 0.14	J 0.29	18.8
	B-52	01	0.5 - 2.0	ND	J 0.2	J 0.15	J 0.19	J 0.18	J 0.23	22.7
		02	3.5 - 5.0	ND	J 1.9	J 1.3	J 1.4	J 1.5	J 1.9	37
		03	6.0 - 7.5	ND	1.1	J 0.77	0.81	J 0.76	1.1	30.6
BP 01	B-53	01	0.5 - 2.0	ND	J 1.3	J 1.2	J 1.2	J 1.7	J 1.7	13.3
		02	3.5 - 5.0	ND	J 1.5	J 1.2	J 1	J 1.1	1.8	481
		03	6.0 - 7.5	ND	J 1.2	J 0.98	J 1.1	J 1.2	J 1.5	45.3
	B-54	01	0.5 - 2.0	ND	J 0.21	J 0.15	J 0.2	J 0.17	J 0.25	24
		02	3.5 - 5.0	ND	J 0.15	J 0.099	J 0.13	J 0.12	J 0.17	20.1
		03	6.0 - 7.5	ND	J 0.1	J 0.077	J 0.083	J 0.13	J 0.13	17.6
	B-55	01	0.5 - 2.0	ND, R	J 2.3	J 1.4	J 1.4	J 1.5	J 2.9	845
		02	3.5 - 5.0	ND, R	J 0.36	J 0.21	J 0.27	J 0.25	J 0.49	57.5
		03	6.0 - 7.5	ND, R	J 0.37	J 0.22	J 0.26	J 0.23	J 0.5	366
GW 29	B-56	01	0.5 - 2.0	ND	ND	ND	ND	ND	ND	8
		02	3.5 - 5.0	ND	ND	ND	ND	ND	ND	7.2
		03	6.0 - 7.5	ND	ND	ND	ND	ND	ND	5.8
	B-57	01	0.5 - 2.0	ND	ND	ND	ND	ND	ND	5.9
		02	3.5 - 5.0	ND	ND	ND	ND	ND	ND	6.8
		03	6.0 - 7.5	ND	ND	ND	ND	ND	ND	6.7
	B-58	01	0.5 - 2.0	ND, R	ND	ND	ND	ND	ND	13.4
		02	3.5 - 5.0	ND, R	ND	ND	ND	ND	ND	6.5
		03	6.0 - 7.5	ND, R	ND	ND	ND	ND	ND	9.0
GW 38	B-80	01	0.5 - 2.0	ND, R	J 0.54	J 0.31	J 0.32	J 0.29	0.63	47.4
		02	3.5 - 5.0	ND, R	J 0.29	J 0.19	J 0.37	J 0.18	J 0.39	51.3
		03	6.0 - 7.5	ND, R	J 0.14	J 0.091	J 0.11	J 0.12	J 0.19	42.3
	B-81	01	0.5 - 2.0	ND, R *	J 0.13	J 0.077	J 0.099	J 0.079	J 0.16	91.5
		02	3.5 - 5.0	ND, R	J 0.1	J 0.071	J 0.073	J 0.064	J 0.12	31.9
		03	6.0 - 7.5	ND, R	J 0.056	ND	J 0.047	J 0.038	J 0.076	30.2
	B-82	01	0.5 - 2.0	ND, R	J 0.84	J 0.58	J 0.69	J 0.58	J 1.1	71.9
		02	3.5 - 5.0	ND	J 1.9	J 1.4	J 1.6	J 1.2	2.5	109
		03	6.0 - 7.5	ND, R	1	J 0.72	0.75	J 0.66	1.3	72.9

PHASE II RI STUDY

BP-01	A	1.0 - 1.25	NT	J 0.42	J 0.4	ND	ND	J 0.5	207
BP-02	A	0.0 - 1.5	NT	J 0.59	J 0.65	1	0.77	J 0.57	3.7
	B	3.5 - 5.0	NT	ND	ND	ND	ND	ND	12.8
	C	6.0 - 7.5	NT	J 0.46	J 0.49	J 0.81	ND	J 0.5	11
	D	8.5 - 10.0	NT	ND	ND	ND	ND	ND	8.6
GW-29	A	1.0 - 2.5	NT	ND	ND	ND	ND	ND	6.1
	B	3.5 - 5.0	NT	ND	ND	ND	ND	ND	5.5
GW-38	A	1.0 - 2.5	NT	ND	ND	ND	J 0.05	J 0.06	36.3
	B	3.5 - 5.0	NT	ND	ND	ND	ND	ND	11.4
	C	6.0 - 7.5	NT	ND	J 0.15	ND	ND	ND	11.1
	D	13.5 - 15.0	NT	ND	J 0.062	ND	ND	ND	10.5
CRQL			0.033	0.333	0.33	0.33	0.33	0.33	0.6
Remedial Response Levels			0.16	0.33	0.1	0.33	0.33	0.33	500

Shaded values are concentrations exceeding Remedial Response Levels.
CRQL = Contract Required Quantitation Limits.
ND = Not detected above CRQL or method detection limit.
NT = Not tested.
J=Detected, but estimated value.
R = Rejected Data.
* = Field duplicate acceptable and non-detect.

TABLE 2

VOLUME ESTIMATES

Isolated Area	Estimated Contaminated Soil Volume (C.Y.)	Estimated Excavation Volume (C.Y.)
BP-01/BP-02	50	~~190~~500
~~BP-02~~	~~40~~	~~170~~
GW-29	0	0
GW-38	60	200

APPENDIX I

TEST BORING LOGS

Client: Skinner PRP Group
Project: Skinner RDI - CSDI
Location: West Chester, Ohio
Project No: 72680.300

LOG OF BORING NO. B-50

DEPTH (feet)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE ID	RECOVERY (inches)	FID (ppm)	ELEV. (MSL) 888.51 (ft.)	STANDARD PENETRATION TEST DATA (blows/ft) 10 20 30 8080	N VALUE
		Brown lean sandy CLAY with gravel.	SB5001	5	BG			21
		Olive brown clayey SAND.	SB5002	8	BG			10
5						881.51		
		Brown clayey SAND.	SB5003	12	BG			9
		Boring terminated at 7.5 ft.						
10						858.51		

DATE STARTED: 10-12-94
DATE FINISHED: 10-12-94
DRILLING METHOD: 4-1/4" ID Hollow Stem Auger
GEOLOGIST: P.D. Thompson
DRILLER: D. Roelker
WATER LEVEL: --

NOTES:
BG = Background
FID background is 0.5 ppm.

RUST Environment & Infrastructure

Client: Skinner PRP Group
Project: Skinner RDI - CSDI
Location: West Chester, Ohio
Project No: 72680.300

LOG OF BORING NO. B-51

DEPTH (feet)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE ID	RECOVERY (inches)	FID (ppm)	ELEV. (MSL) 888.35 (ft.)	STANDARD PENETRATION TEST DATA (blows/ft) 10 20 30 8080	N VALUE
		Brown lean CLAY.	SB5101	8	BG			18
			SB5102	8	BG			8
5						881.35		
		Brown lean CLAY with gravel.	SB5103	15	BG			13
		Boring terminated at 7.5 ft.						
10						858.35		

DATE STARTED: 10-12-94
DATE FINISHED: 10-12-94
DRILLING METHOD: 4-1/4" ID Hollow Stem Auger
GEOLOGIST: P.D. Thompson
DRILLER: D. Roelker
WATER LEVEL: --

NOTES:
BG = Background
FID background is 0.5 ppm.

RUST Environment & Infrastructure

Client: Skinner PRP Group
Project: Skinner RDI - CSDI
Location: West Chester, Ohio
Project No: 72680.300

LOG OF BORING NO. B-52

DEPTH (feet)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE ID	RECOVERY (inches)	FID (ppm)	ELEV. (MSL) 888.3 (ft.)	STANDARD PENETRATION TEST DATA (blows/ft) 10 20 30 80 80	N VALUE
		Brown sandy CLAY with gravel.	SB5201	4	BG			31
		Brown and gray sandy CLAY with gravel.	SB5202	10	20			8
5						881.3		
			SB5203	12	12			14
		Boring terminated at 7.5 ft.						
10						878.3		

DATE STARTED: 10-13-94
DATE FINISHED: 10-13-94
DRILLING METHOD: 4-1/4" ID Hollow Stem Auger
GEOLOGIST: P.D. Thompson
DRILLER: D. Roelker
WATER LEVEL: --

NOTES:
BG = Background
FID background is 0.5 ppm.

RUST Environment & Infrastructure

Client: Skinner PRP Group
Project: Skinner RDI - CSDI
Location: West Chester, Ohio
Project No: 72680.300

LOG OF BORING NO. B-53

DEPTH (feet)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE ID	RECOVERY (Inches)	FID (ppm)	ELEV. (MSL) 864.86 (ft.)	STANDARD PENETRATION TEST DATA (blows/ft) 10 20 30 60 80	N VALUE
		Brown and black SAND with gravel.-(Possible Fill)	SB5301	4	BG			13
		Gray silty CLAY. Wet.	SB5302	4	BG			4
5						859.86		
			SB5303	6	BG			11
		Boring terminated at 7.5 ft.						
10						854.86		

DATE STARTED: 10-13-94
DATE FINISHED: 10-13-94
DRILLING METHOD: 4-1/4" ID Hollow Stem Auger
GEOLOGIST: P.D. Thompson
DRILLER: D. Roelker
WATER LEVEL: --

NOTES:
BG = Background
FID background is 0.5 ppm.

RUST Environment & Infrastructure

Client: Skinner PRP Group
Project: Skinner RDI - CSDI
Location: West Chester, Ohio
Project No: 72680.300

LOG OF BORING NO. B-54

DEPTH (feet)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE ID	RECOVERY (Inches)	FID (ppm)	ELEV. (MSL) 664.62 (ft.)	STANDARD PENETRATION TEST DATA (blows/ft) 10 20 30 60 80	N VALUE
		Brown clayey SAND with gravel.	SB5401	15	BG			28
			SB5402	15	BG			11
5						659.82		
			SB5403	12	BG			8
		Boring terminated at 7.5 ft.						
10						654.82		

DATE STARTED: 10-13-94
DATE FINISHED: 10-13-94
DRILLING METHOD: 4-1/4" ID Hollow Stem Auger
GEOLOGIST: P.D. Thompson
DRILLER: D. Roelker
WATER LEVEL: --

NOTES:
BG = Background
FID background is 0.5 ppm.

RUST Environment & Infrastructure

Client: Skinner PRP Group
Project: Skinner RDI - CSDI
Location: West Chester, Ohio
Project No: 72680.300

LOG OF BORING NO. B-55

DEPTH (feet)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE ID	RECOVERY (inches)	FID (ppm)	ELEV. (MSL) 864.72 (ft.)	STANDARD PENETRATION TEST DATA (blows/ft) 10 20 30 60 80	N VALUE
		Brown clayey SAND with gravel.	SB5501	8	6.4			25
		Brown and olive clayey SAND with gravel.	SB5502	12	BG			8
5			SB5503	8	BG	859.72		11
		Boring terminated at 7.5 ft.						
10						854.72		

DATE STARTED: 10-13-94
DATE FINISHED: 10-13-94
DRILLING METHOD: 4-1/4" ID Hollow Stem Auger
GEOLOGIST: P.D. Thompson
DRILLER: D. Roelker
WATER LEVEL: --

NOTES:
BG = Background
FID background is 0.5 ppm.

RUST Environment & Infrastructure

Client: Skinner PRP Group
Project: Skinner RDI - CSDI
Location: West Chester, Ohio
Project No: 72680.300

LOG OF TEST PIT B-56

DEPTH (feet)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE ID	RECOVERY (Inches)	FID (ppm)	ELEV. (MSL) 719.53 (ft.)	STANDARD PENETRATION TEST DATA (blows/ft) 10 20 30 8080	N VALUE
		Brown coarse SAND with gravel. Moist.	SB5801	N/A	BG			N/A
			SB5802	N/A	BG			N/A
5						714.53		
			SB5803	N/A	BG			N/A
		Boring terminated at 7.5 ft.						
10						709.53		

DATE STARTED: 11-04-94
DATE FINISHED: 11-04-94
DRILLING METHOD: Track Hoe
GEOLOGIST: P.D. Thompson
Test Pit
WATER LEVEL: --

NOTES:
BG = Background
FID background is 0.5 ppm.
N/A = Not Available

RUST Environment & Infrastructure

Client: Skinner PRP Group
Project: Skinner RDI - CSDI
Location: West Chester, Ohio
Project No: 72680.300

LOG OF BORING NO. B-57

DEPTH (feet)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE ID	RECOVERY (Inches)	FID (ppm)	ELEV. (MSL) 719.94 (ft.)	STANDARD PENETRATION TEST DATA (blows/ft) 10 20 30 80 80	N VALUE
		Brown SILT with gravel.	SB5701	12	BG			74
			SB5702	8	BG			28
5						714.94		
			SB5703	5	BG			94
		Boring terminated at 7.5 ft.						
10						709.94		

DATE STARTED: 10-11-94
DATE FINISHED: 10-11-94
DRILLING METHOD: 4-1/4" ID Hollow Stem Auger
GEOLOGIST: P.D. Thompson
DRILLER: D. Roelker
WATER LEVEL: --

NOTES:
BG = Background
FID background is 0.2 ppm

RUST Environment & Infrastructure

Client: Skinner PRP Group
Project: Skinner RDI - CSDI
Location: West Chester, Ohio
Project No: 72680.300

LOG OF BORING NO. B-58

DEPTH (feet)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE ID	RECOVERY (Inches)	FID (ppm)	ELEV. (MSL) 719.65 (ft.)	STANDARD PENETRATION TEST DATA (blows/ft) 10 20 30 60 80	N VALUE
		Brown silty CLAY with gravel.	SB5801	12	BG			48
		Brown sandy SILT with gravel.	SB5802	24	BG			48
5						714.65		
			SB5803	12	BG			35
		Boring terminated at 7.5 ft.						
10						708.65		

DATE STARTED: 10-11-94
DATE FINISHED: 10-11-94
DRILLING METHOD: 4-1/4" ID Hollow Stem Auger
GEOLOGIST: P.D. Thompson
DRILLER: D. Roelker
WATER LEVEL: --

NOTES:
BG = Background
FID background is 0.2 ppm

RUST Environment & Infrastructure

Client: Skinner PRP Group
Project: Skinner RDI - CSDI
Location: West Chester, Ohio
Project No: 72680.300

LOG OF BORING NO. B-80

DEPTH (feet)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE ID	RECOVERY (inches)	FID (ppm)	ELEV. (MSL) 883.88 (ft.)	STANDARD PENETRATION TEST DATA (blows/ft) 10 20 30 60 80	N VALUE
		Brown clayey sandy GRAVEL. (FILL)	SB8001	10	BG			28
			SB8002	10	BG			32
5						878.88		
			SB8003	8	BG			35
		Boring terminated at 7.5 ft.						
10						873.88		

DATE STARTED: 10-12-94
DATE FINISHED: 10-12-94
DRILLING METHOD: 4-1/4" ID Hollow Stem Auger
GEOLOGIST: P.D. Thompson
DRILLER: D. Roelker
WATER LEVEL: --

NOTES:
BG = Background
FID background is 0.5 ppm.

RUST Environment & Infrastructure

Client: Skinner PRP Group
Project: Skinner RDI - CSDI
Location: West Chester, Ohio
Project No: 72680.300

LOG OF BORING NO. B-81

DEPTH (feet)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE ID	RECOVERY (inches)	FID (ppm)	ELEV. (MSL) 883.89 (ft.)	STANDARD PENETRATION TEST DATA (blows/ft) 10 20 30 60 80	N VALUE
		Brown sandy clayey SILT.	SB8101	12	BG			28
		Brown sandy silty CLAY.	SB8102	6	BG			19
5						878.89		
		Brown clayey sandy SILT.	SB8103	18	BG			22
		Boring terminated at 7.5 ft.						
10						873.89		

DATE STARTED: 10-12-94
DATE FINISHED: 10-12-94
DRILLING METHOD: 4-1/4" ID Hollow Stem Auger
GEOLOGIST: P.D. Thompson
DRILLER: D. Roelker
WATER LEVEL: --

NOTES:
BG = Background
FID background is 0.5 ppm.

RUST Environment & Infrastructure

Client: Skinner PRP Group
Project: Skinner RDI - CSDI
Location: West Chester, Ohio
Project No: 72680.300

LOG OF BORING NO. B-82

DEPTH (feet)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE ID	RECOVERY (inches)	FID (ppm)	ELEV. (MSL) 883.97 (ft.)	STANDARD PENETRATION TEST DATA (blows/ft) 10 20 30 8080	N VALUE
		Brown sandy silty CLAY.	SB8201	5	BG			22
			SB8202	10	BG			10
5						878.97		
		Brown clayey sandy SILT with limestone.	SB8203	8	BG			55
		Boring terminated at 7.5 ft.						
10						873.97		

DATE STARTED: 10-12-94
DATE FINISHED: 10-12-94
DRILLING METHOD: 4-1/4" ID Hollow Stem Auger
GEOLOGIST: P.D. Thompson
DRILLER: D. Roelker
WATER LEVEL: --

NOTES:
BG = Background
FID background is 0.5 ppm.

RUST Environment & Infrastructure

WW Engineering & Science, Inc.
Environmental Services Division

Page: 1 of 1
Well/Boring No.: BP-01
Client: ARCS-Skinner
Project No.: 04003.07

Well/Boring Log Sheet

County	Township	Fraction	Section	T	R
Butler	Union	1/4 1/4 1/4			

Contractor ATEC
Address: 11121 Canal St. Cincinnati, Ohio
Equipment: Mobile Drill B-53
Crew Chief: B.C. Manos
Supervisor: M. Potter

Drilling Method(s) — **Depth**
3 1/4" HSA — 0'-20'

Grouting/Seal

Depth/To	Material/Method
20'-surface	Cement-bent. grout

Development N/A

Screen
Manufacturer: N/A
Material:
Model:
Slot/Gauze: Dia.:
Length:
Depth Set: To:

Casing

Dia.	Type	Depth Set
N/A		To
		To

Date
Started: 2/6/90 Finished: 2/6/90

Elevation
Casing:
Ground: 664'
Ref. Pt.:

Water Level 0.7' Ft. Below surface
Measure On: 2/6/90 while drilling

Location See boring location diagram
9782.46 East, 8425.33 North

Remarks Split-spoon sampling done with a 3" steel split spoon. Cement-bentonite grout formula was 1 bag cement/6 gallons water and enough bent to thicken the slurry. Sample for analysis taken from 0-1.5' depth. *

Thick-ness (feet)	Depth to Base	LITHOLOGIC DESCRIPTION		Sample Depth	Blow Counts 6"	12"	18"	Hnu	Analysis
18.0'	18.0'	Gravel and sand, some silt and clay, wood, very	(GP-SP)	1'-2.5'	7	7	5	0	A
		moist, brown (wet below 0.7') (FILL)		3.5'-5.0'	7	6	19	0	
2.0'	20.0'	Silt-clay, trace of gravel, moist, gray, no shells present in	(CL)	6'-7.5'	4	6	50/3	0	
		clay, gravel is rounded		8.5'-10'	22	18	17	0	
				13.5'-14.5'	30	73	-	0	
		20' bottom of boring		15'-15.3'	100/4"	-	-	0	
				18.5'-20'	17	24	35	0	

*The gravel and sand (0-18') zone seemed fairly porous and permeable while the silt-clay (18'-20') seemed less porous and relatively impermeable.

WW Engineering & Science, Inc.
Environmental Services Division

Page: 1 of 1
Well/Boring No.: BP-02
Client: ARCS-Skinner
Project No.: 04003.07

Well/Boring Log Sheet

County	Township	Fraction	Section	T	R
Butler	Union	1/4 1/4 1/4			

Contractor ATEC
Address: 11121 Canal St.
Cincinnati, Ohio
Equipment: Mobile Drill B-53
Crew Chief: B.C. Manos
Supervisor: M. Potter

Drilling Method(s) — **Depth**
1/4" HSA — 0'-10.0'

Grouting/Seal
Depth/To — Material/Method
10.0'-surface — Cement-bent. grout

Development N/A

Screen
Manufacturer: N/A
Material:
Model:
Slot/Gauze: Dia.:
Length:
Depth Set: To:

Casing
Dia. — Type — Depth Set
N/A — To
To

Date
Started: 2/6/90 Finished: 2/7/90

Elevation
Casing:
Ground: 666.1'
Ref. Pt.:

Water Level 7.0' Ft. Below surface
Measure On: 2/6/90 while drilling

Location See boring location diagram
9744.81 East, 8397.97 North

Remarks Hnu was not working, switched to OVA, 1/2 hr standby. OVA reading on first sample (0-1.5) was from head space in description jar. Sample C (6'-7.5') was sampled due to a black discoloration of the soil.

Thickness (feet)	Depth to Base	LITHOLOGIC DESCRIPTION		Analysis: OVA / Blow Counts: 18" / 12" / 6" / Sample Depth					
7.0'	7.0'	Silt, clay, trace of gravel, moist, gray	(CL)	0'-1.5'	6	6	9	9	A, D+
3.0'	10.0'	Sand and gravel, silty, brown, wet	(SP-GP)	1.5'-2.5'	4	6	7	0	
				3.5'-5.0'	3	14	15	25	B
				6'-7.5'	4	5	6	0	C
				8.5'-10'	6	4	3	24	D
		10.0' bottom of boring							

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Environmental Services Division

Page: 1 of 1
Well/Boring No.: GW-29
Client: ARCS-Skinner
Project No.: 04003.07

Well/Boring Log Sheet

County	Township	Fraction	Section	T	R
Butler	Union	1/4 1/4 1/4			

Contractor ATEC
Address: 11121 Canal St.
Cincinnati, Ohio
Equipment: Mobile Drill B-53
Crew Chief: B.C. Manos
Supervisor: M. Potter

Drilling Method(s)	Depth
4-1/4" HSA	0'-20'
3-7/8" Rotary Wash	20'-29.5'

Grouting/Seal

Depth/To	Material/Method
28.8'-20.0'	Sand pack
20.0'-17.7'	Bentonite pellets
17.7'-1.0'	Cement-bent. grout
1.0'-surface	Concrete

Development Teflon bailer-12 gallons

Screen
Manufacturer: Johnson
Material: stainless steel
Model: wire wound
Slot/Gauze: #10 Dia.: 2"
Length: 5'
Depth Set: 28' To: 23'

Casing

Dia.	Type	Depth Set		
2"	SS	23.8'	To	+1.8'
			To	

Date
Started: 2/27/90 Finished: 2/28/90

Elevation
Casing: 722.11'
Ground: 720.31'
Ref. Pt.:

Water Level 24.3' Ft. Below surface
Measure On: 2-28-90 at 0820

Location See boring location map
10495.75 East, 9211.47 North

Remarks Not enough recovery 3.5'-5.0' for analysis. Consolidated rock descriptions are from drilling rates and should be used in conjunction with geophysical logs for interpretations; moved ahead 5' and went down to 3.5' and collected 3.5'-5.0 sample for analysis.

Thickness (feet)	Depth to Base (feet)	LITHOLOGIC DESCRIPTION	Analysis	Sample Depth	Blow Counts Background	Hnu/OVA	18"	12"	6"	
6.0'	6.0'	Sand and gravel, silty, moist, brown (SP-GP)		1'-2.5'	16	24	24	5	5	A
9.0'	15.0'	Shale		3.5'-5.0'	55	-	-	2	2	B
0.5'	15.5'	Limestone		6.0'-7.5'	110	50	40	3	3	
3.5'	19.0'	Shale		8.5'-10'	45	45	50/3	2	2	
0.5'	19.5'	Limestone								
10'	29.5'	Shale								
		29.5' bottom of boring								

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Page: 1 of 1
Well/Boring No.: GW-38
Client: ARCS-Skinner
Project No.: 04003.07

Well/Boring Log Sheet

County	Township	Fraction	Section	T	R
Butler	Union	1/4 1/4 1/4			

Contractor ATEC
Address: 11121 Canal St.
Cincinnati, Ohio
Equipment: B-53, B-57
Crew Chief: B.C. Manos, R. Groves
Supervisor: M. Potter

Drilling Method(s)	Depth
6-1/4" HSA	0'-38.5'
3-7/8" Rotary Wash	38.5'-60'

Grouting/Seal

Depth/To	Material/Method
60'-39.4'	Sand-Pack
39.4'-36.3'	Bentonite Pellets
36.3'-0.5'	Cement-Bent. Grout
0.5'-surface	Concrete

Development Teflon bailer-40 gallons

Screen
Manufacturer: Johnson
Material: Stainless Steel
Model: Wire Wound
Slot/Gauze: .010 **Dia.:** 2"
Length: 5'
Depth Set: 48' **To:** 43'

Casing

Dia.	Type	Depth Set
4"	Blk. Steel	0 To 40'
2"	S.S.	43 To 0'

Date
Started: 3/5/90 **Finished:** 3/10/90

Elevation
Casing: 684.50'
Ground: 684.50'
Ref. Pt.:

Water Level 15.75' Ft. Below TOC
Measure On: 4-20-90

Location See boring location diagram
10877.43 East, 8491.11 North

Remarks Not enough recovery from 18.5' - 19.0' sample for analysis. Grout ran out 7' from surface while grouting 4" black steel casing. We left it open and will grout it up when we finish. The well consolidated rock desc. are interpreted from drilling rates and should be used in conjunction with geophysical logs for proper identification. The lithologic descriptions below 37.5' are not from actual samples and may be erroneous. We used 2000 gals. of water while rotary washing this well.

Thickness (feet)	Depth to Base (feet)	LITHOLOGIC DESCRIPTION		Sample Depth	Blow Counts 6"	12"	18"	OVM	Background	Analysis	
1.0	1.0	Sand & Gravel, silty, moist, brown	(sp-gp)	1-2.5	10	18	18	2	2		A
2.0	3.0	Silt-clay, tr. sand, moist, black-brown	(ml-cl)	3.5-5	10	8	10	100	2		B
1.5	4.5	Sand & Gravel, wet, brown	(sp-gp)	6-7.5	10	25	50	30	2		C
2.0	6.5	Silt-clay, trace sand, moist, brown	(ml-cl)	8.5-10	18	25	25	2	2		
10.5	17.0	Sand & Gravel, silty, wet, brown	(sp-gp)	13.5-15	10	24	37	10	2		D
4.0	21.0	Silt, some fine sand, wet, brown,	(ml)	18.5-19	100/5	-	-	15	2		
16.5	37.5	Clay, trace gravel, moist, gray, gravel is rounded	(cl)	23.5-25	22	28	40	2	2		
1.0	38.5	Limestone		28.5-29.7	12	30	60/2	5	5		
1.5	41.0	Shale		33.5-35	40	50	50/3	5	5		
2.0	43.0	Limestone									
2.0	45.0	Shale									
1.0	46.0	Limestone									
2.0	48.0	Shale									
5.0	53.0	Limestone									
0.5	53.5	Shale									
4.5	58.0	Limestone									
2.0	60.0	Shale									
		60' bottom of boring									

APPENDIX II

ANALYTICAL RESULTS - CONTAMINATED SOIL AREAS

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SB5001

Lab Name: NYTEST ENV INC Contract: 9421375

Lab Code: NYTEST Case No.: 22288 SAS No.: SDG No.: SKIN2

Matrix: (soil/water) SOIL Lab Sample ID: 2228811

Sample wt/vol: 30.0 (g/mL) G Lab File ID: R1509.D

Level: (low/med) LOW Date Received: 10/13/94

% Moisture: 11 decanted: (Y/N) N Date Extracted:10/18/94

Concentrated Extract Volume: 500(UL) Date Analyzed: 11/23/94

Injection Volume: 2.0(uL) Dilution Factor: 5.0

GPC Cleanup: (Y/N) Y pH: 5.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
91-20-3	Naphthalene	1900	U
208-96-8	Acenaphthylene	1900	U
83-32-9	Acenaphthene	300	J
86-73-7	Fluorene	240	J
85-01-8	Phenanthrene	2900	
120-12-7	Anthracene	410	J
206-44-0	Fluoranthene	5400	
129-00-0	Pyrene	4800	
56-55-3	Benzo(a)anthracene	2300	
218-01-9	Chrysene	2800	
205-99-2	Benzo(b)fluoranthene	1600	J
207-08-9	Benzo(k)fluoranthene	1300	J
50-32-8	Benzo(a)pyrene	1400	J
193-39-5	Indeno(1,2,3-cd)pyrene	840	J
53-70-3	Dibenz(a,h)anthracene	1900	U
191-24-2	Benzo(g,h,i)perylene	950	J

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SB5002

Lab Name: NYTEST ENV INC Contract: 9421375

Lab Code: NYTEST Case No.: 22288 SAS No.: SDG No.: SKIN2

Matrix: (soil/water) SOIL Lab Sample ID: 2228807

Sample wt/vol: 30.0 (g/mL) G Lab File ID: R1478.D

Level: (low/med) LOW Date Received: 10/13/94

% Moisture: 10 decanted: (Y/N) N Date Extracted:10/18/94

Concentrated Extract Volume: 500(UL) Date Analyzed: 11/22/94

Injection Volume: 2.0(uL) Dilution Factor: 5.0

GPC Cleanup: (Y/N) Y pH: 4.9

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
91-20-3	Naphthalene	1800	U
208-96-8	Acenaphthylene	200	J
83-32-9	Acenaphthene	600	J
86-73-7	Fluorene	790	J
85-01-8	Phenanthrene	6500	
120-12-7	Anthracene	1000	J
206-44-0	Fluoranthene	9800	
129-00-0	Pyrene	9600	
56-55-3	Benzo(a)anthracene	4600	
218-01-9	Chrysene	5700	
205-99-2	Benzo(b)fluoranthene	3400	
207-08-9	Benzo(k)fluoranthene	2400	
50-32-8	Benzo(a)pyrene	3000	
193-39-5	Indeno(1,2,3-cd)pyrene	1300	J
53-70-3	Dibenz(a,h)anthracene	1800	U
191-24-2	Benzo(g,h,i)perylene	1200	J

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

SB5003

Lab Name: NYTEST ENV INC Contract: 9421375

Lab Code: NYTEST Case No.: 22288 SAS No.: SDG No.: SKIN2

Matrix: (soil/water) SOIL Lab Sample ID: 2228801

Sample wt/vol: 30.0 (g/mL) G Lab File ID: R1472.D

Level: (low/med) LOW Date Received: 10/13/94

% Moisture: 14 decanted: (Y/N) N Date Extracted: 10/18/94

Concentrated Extract Volume: 500 (UL) Date Analyzed: 11/22/94

Injection Volume: 2.0 (uL) Dilution Factor: 2.0

GPC Cleanup: (Y/N) Y pH: 5.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
91-20-3	Naphthalene	82	J
208-96-8	Acenaphthylene	780	U
83-32-9	Acenaphthene	230	J
86-73-7	Fluorene	230	J
85-01-8	Phenanthrene	2300	
120-12-7	Anthracene	360	J
206-44-0	Fluoranthene	3800	
129-00-0	Pyrene	3500	
56-55-3	Benzo(a)anthracene	1700	
218-01-9	Chrysene	2100	
205-99-2	Benzo(b)fluoranthene	1200	
207-08-9	Benzo(k)fluoranthene	850	
50-32-8	Benzo(a)pyrene	1100	
193-39-5	Indeno(1,2,3-cd)pyrene	620	J
53-70-3	Dibenz(a,h)anthracene	780	U
191-24-2	Benzo(g,h,i)perylene	650	J

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SB5101

Lab Name: NYTEST ENV INC Contract: 9421375

Lab Code: NYTEST Case No.: 22288 SAS No.: SDG No.: SKIN2

Matrix: (soil/water) SOIL Lab Sample ID: 2228803

Sample wt/vol: 30.0 (g/mL) G Lab File ID: R1474.D

Level: (low/med) LOW Date Received: 10/13/94

% Moisture: 12 decanted: (Y/N) N Date Extracted: 10/18/94

Concentrated Extract Volume: 500(UL) Date Analyzed: 11/22/94

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 5.8

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
91-20-3	Naphthalene	380	U
208-96-8	Acenaphthylene	380	U
83-32-9	Acenaphthene	92	J
86-73-7	Fluorene	89	J
85-01-8	Phenanthrene	1100	
120-12-7	Anthracene	160	J
206-44-0	Fluoranthene	2000	
129-00-0	Pyrene	2000	
56-55-3	Benzo(a)anthracene	940	
218-01-9	Chrysene	1200	
205-99-2	Benzo(b)fluoranthene	660	
207-08-9	Benzo(k)fluoranthene	580	
50-32-8	Benzo(a)pyrene	590	
193-39-5	Indeno(1,2,3-cd)pyrene	330	J
53-70-3	Dibenz(a,h)anthracene	380	U
191-24-2	Benzo(g,h,i)perylene	340	J

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SB5102

Lab Name: NYTEST ENV INC Contract: 9421375

Lab Code: NYTEST Case No.: 22288 SAS No.: SDG No.: SKIN2

Matrix: (soil/water) SOIL Lab Sample ID: 2228802

Sample wt/vol: 30.0 (g/mL) G Lab File ID: R1473.D

Level: (low/med) LOW Date Received: 10/13/94

% Moisture: 10 decanted: (Y/N) N Date Extracted: 10/18/94

Concentrated Extract Volume: 500 (UL) Date Analyzed: 11/22/94

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 4.9

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
91-20-3	Naphthalene	110	J
208-96-8	Acenaphthylene	65	J
83-32-9	Acenaphthene	530	
86-73-7	Fluorene	680	
85-01-8	Phenanthrene	2700	
120-12-7	Anthracene	770	
206-44-0	Fluoranthene	2600	
129-00-0	Pyrene	2600	
56-55-3	Benzo(a)anthracene	1400	
218-01-9	Chrysene	1400	
205-99-2	Benzo(b)fluoranthene	780	
207-08-9	Benzo(k)fluoranthene	610	
50-32-8	Benzo(a)pyrene	800	
193-39-5	Indeno(1,2,3-cd)pyrene	400	
53-70-3	Dibenz(a,h)anthracene	370	U
191-24-2	Benzo(g,h,i)perylene	410	

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SB5103

Lab Name: NYTEST ENV INC Contract: 9421375

Lab Code: NYTEST Case No.: 22288 SAS No.: SDG No.: SKIN2

Matrix: (soil/water) SOIL Lab Sample ID: 2228806

Sample wt/vol: 30.0 (g/mL) G Lab File ID: R1477.D

Level: (low/med) LOW Date Received: 10/13/94

% Moisture: 18 decanted: (Y/N) N Date Extracted:10/18/94

Concentrated Extract Volume: 500(UL) Date Analyzed: 11/22/94

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 5.5

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
91-20-3	Naphthalene	58	J
208-96-8	Acenaphthylene	410	U
83-32-9	Acenaphthene	96	J
86-73-7	Fluorene	130	J
85-01-8	Phenanthrene	610	
120-12-7	Anthracene	110	J
206-44-0	Fluoranthene	630	
129-00-0	Pyrene	560	
56-55-3	Benzo(a)anthracene	260	J
218-01-9	Chrysene	290	J
205-99-2	Benzo(b)fluoranthene	160	J
207-08-9	Benzo(k)fluoranthene	140	J
50-32-8	Benzo(a)pyrene	140	J
193-39-5	Indeno(1,2,3-cd)pyrene	76	J
53-70-3	Dibenz(a,h)anthracene	410	U
191-24-2	Benzo(g,h,i)perylene	78	J

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1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SB5201

Lab Name: NYTEST ENV INC Contract: 9421375

Lab Code: NYTEST Case No.: 22303 SAS No.: SDG No.: SKIN3

Matrix: (soil/water) SOIL Lab Sample ID: 2230309

Sample wt/vol: 30.0 (g/mL) G Lab File ID: S1637.D

Level: (low/med) LOW Date Received: 10/15/94

% Moisture: 11 decanted: (Y/N) N Date Extracted:10/20/94

Concentrated Extract Volume: 500(UL) Date Analyzed: 11/24/94

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
91-20-3	Naphthalene	370	U
208-96-8	Acenaphthylene	370	U
83-32-9	Acenaphthene	370	U
86-73-7	Fluorene	370	U
85-01-8	Phenanthrene	230	J
120-12-7	Anthracene	40	J
206-44-0	Fluoranthene	480	
129-00-0	Pyrene	440	
56-55-3	Benzo(a)anthracene	200	J
218-01-9	Chrysene	230	J
205-99-2	Benzo(b)fluoranthene	190	J
207-08-9	Benzo(k)fluoranthene	180	J
50-32-8	Benzo(a)pyrene	150	J
193-39-5	Indeno(1,2,3-cd)pyrene	66	J
53-70-3	Dibenz(a,h)anthracene	370	U
191-24-2	Benzo(g,h,i)perylene	59	J

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SB5202

Lab Name: NYTEST ENV INC Contract: 9421375

Lab Code: NYTEST Case No.: 22303 SAS No.: SDG No.: SKIN3

Matrix: (soil/water) SOIL Lab Sample ID: 2230308

Sample wt/vol: 30.0 (g/mL) G Lab File ID: S1636.D

Level: (low/med) LOW Date Received: 10/15/94

% Moisture: 13 decanted: (Y/N) N Date Extracted: 10/20/94

Concentrated Extract Volume: 500 (UL) Date Analyzed: 11/24/94

Injection Volume: 2.0 (uL) Dilution Factor: 10.0

GPC Cleanup: (Y/N) Y pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
91-20-3	Naphthalene	3800	U
208-96-8	Acenaphthylene	3800	U
83-32-9	Acenaphthene	3800	U
86-73-7	Fluorene	470	J
85-01-8	Phenanthrene	2600	J
120-12-7	Anthracene	570	J
206-44-0	Fluoranthene	4700	
129-00-0	Pyrene	3700	J
56-55-3	Benzo(a)anthracene	1900	J
218-01-9	Chrysene	1900	J
205-99-2	Benzo(b)fluoranthene	1400	J
207-08-9	Benzo(k)fluoranthene	1500	J
50-32-8	Benzo(a)pyrene	1300	J
193-39-5	Indeno(1,2,3-cd)pyrene	410	J
53-70-3	Dibenz(a,h)anthracene	3800	U
191-24-2	Benzo(g,h,i)perylene	3800	U

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SB5203

Lab Name: NYTEST ENV INC Contract: 9421375

Lab Code: NYTEST Case No.: 22303 SAS No.: SDG No.: SKIN3

Matrix: (soil/water) SOIL Lab Sample ID: 2230306

Sample wt/vol: 30.0 (g/mL) G Lab File ID: S1634.D

Level: (low/med) LOW Date Received: 10/15/94

% Moisture: 16 decanted: (Y/N) N Date Extracted:10/20/94

Concentrated Extract Volume: 500(UL) Date Analyzed: 11/24/94

Injection Volume: 2.0(uL) Dilution Factor: 2.0

GPC Cleanup: (Y/N) Y pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
91-20-3	Naphthalene	250	J
208-96-8	Acenaphthylene	160	J
83-32-9	Acenaphthene	150	J
86-73-7	Fluorene	720	J
85-01-8	Phenanthrene	2500	
120-12-7	Anthracene	550	J
206-44-0	Fluoranthene	2700	
129-00-0	Pyrene	2200	
56-55-3	Benzo(a)anthracene	1100	
218-01-9	Chrysene	1000	
205-99-2	Benzo(b)fluoranthene	810	
207-08-9	Benzo(k)fluoranthene	760	J
50-32-8	Benzo(a)pyrene	770	J
193-39-5	Indeno(1,2,3-cd)pyrene	240	J
53-70-3	Dibenz(a,h)anthracene	790	U
191-24-2	Benzo(g,h,i)perylene	180	J

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SB5301

Lab Name: NYTEST ENV INC Contract: 9421375

Lab Code: NYTEST Case No.: 22303 SAS No.: SDG No.: SKIN3

Matrix: (soil/water) SOIL Lab Sample ID: 2230301

Sample wt/vol: 30.0 (g/mL) G Lab File ID: S1629.D

Level: (low/med) LOW Date Received: 10/15/94

% Moisture: 6 decanted: (Y/N) N Date Extracted:10/20/94

Concentrated Extract Volume: 500(UL) Date Analyzed: 11/23/94

Injection Volume: 2.0(uL) Dilution Factor: 10.0

GPC Cleanup: (Y/N) Y pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
91-20-3	Naphthalene	3500	U
208-96-8	Acenaphthylene	3500	U
83-32-9	Acenaphthene	3500	U
86-73-7	Fluorene	3500	U
85-01-8	Phenanthrene	1600	J
120-12-7	Anthracene	3500	U
206-44-0	Fluoranthene	4000	
129-00-0	Pyrene	3600	
56-55-3	Benzo(a)anthracene	1300	J
218-01-9	Chrysene	1700	J
205-99-2	Benzo(b)fluoranthene	1200	J
207-08-9	Benzo(k)fluoranthene	1700	J
50-32-8	Benzo(a)pyrene	1200	J
193-39-5	Indeno(1,2,3-cd)pyrene	420	J
53-70-3	Dibenz(a,h)anthracene	3500	U
191-24-2	Benzo(g,h,i)perylene	3500	U

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SB5302

Lab Name: NYTEST ENV INC Contract: 9421375

Lab Code: NYTEST Case No.: 22303 SAS No.: SDG No.: SKIN3

Matrix: (soil/water) SOIL Lab Sample ID: 2230302

Sample wt/vol: 30.0 (g/mL) G Lab File ID: S1630.D

Level: (low/med) LOW Date Received: 10/15/94

% Moisture: 16 decanted: (Y/N) N Date Extracted:10/20/94

Concentrated Extract Volume: 500(UL) Date Analyzed: 11/23/94

Injection Volume: 2.0(uL) Dilution Factor: 4.0

GPC Cleanup: (Y/N) Y pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
91-20-3	Naphthalene	1600	U
208-96-8	Acenaphthylene	1600	U
83-32-9	Acenaphthene	1600	U
86-73-7	Fluorene	1600	U
85-01-8	Phenanthrene	2000	
120-12-7	Anthracene	310	J
206-44-0	Fluoranthene	3800	
129-00-0	Pyrene	3500	
56-55-3	Benzo(a)anthracene	1500	J
218-01-9	Chrysene	1800	
205-99-2	Benzo(b)fluoranthene	1000	J
207-08-9	Benzo(k)fluoranthene	1100	J
50-32-8	Benzo(a)pyrene	1200	J
193-39-5	Indeno(1,2,3-cd)pyrene	400	J
53-70-3	Dibenz(a,h)anthracene	1600	U
191-24-2	Benzo(g,h,i)perylene	310	J

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SB5303

Lab Name: NYTEST ENV INC Contract: 9421375

Lab Code: NYTEST Case No.: 22303 SAS No.: SDG No.: SKIN3

Matrix: (soil/water) SOIL Lab Sample ID: 2230307

Sample wt/vol: 30.0 (g/mL) G Lab File ID: S1635.D

Level: (low/med) LOW Date Received: 10/15/94

% Moisture: 15 decanted: (Y/N) N Date Extracted:10/20/94

Concentrated Extract Volume: 500(UL) Date Analyzed: 11/24/94

Injection Volume: 2.0(uL) Dilution Factor: 10.0

GPC Cleanup: (Y/N) Y pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
91-20-3	Naphthalene	3900	U
208-96-8	Acenaphthylene	3900	U
83-32-9	Acenaphthene	3900	U
86-73-7	Fluorene	3900	U
85-01-8	Phenanthrene	1500	J
120-12-7	Anthracene	3900	U
206-44-0	Fluoranthene	3400	J
129-00-0	Pyrene	2900	J
56-55-3	Benzo(a)anthracene	1200	J
218-01-9	Chrysene	1500	J
205-99-2	Benzo(b)fluoranthene	1100	J
207-08-9	Benzo(k)fluoranthene	1200	J
50-32-8	Benzo(a)pyrene	980	J
193-39-5	Indeno(1,2,3-cd)pyrene	3900	U
53-70-3	Dibenz(a,h)anthracene	3900	U
191-24-2	Benzo(g,h,i)perylene	3900	U

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SB5401

Lab Name: NYTEST ENV INC Contract: 9421375

Lab Code: NYTEST Case No.: 22303 SAS No.: SDG No.: SKIN3

Matrix: (soil/water) SOIL Lab Sample ID: 2230303

Sample wt/vol: 30.0 (g/mL) G Lab File ID: S1631.D

Level: (low/med) LOW Date Received: 10/15/94

% Moisture: 17 decanted: (Y/N) N Date Extracted:10/20/94

Concentrated Extract Volume: 500(UL) Date Analyzed: 11/23/94

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
91-20-3	Naphthalene	400	U
208-96-8	Acenaphthylene	400	U
83-32-9	Acenaphthene	400	U
86-73-7	Fluorene	400	U
85-01-8	Phenanthrene	250	J
120-12-7	Anthracene	400	U
206-44-0	Fluoranthene	530	
129-00-0	Pyrene	440	
56-55-3	Benzo(a)anthracene	210	J
218-01-9	Chrysene	250	J
205-99-2	Benzo(b)fluoranthene	200	J
207-08-9	Benzo(k)fluoranthene	170	J
50-32-8	Benzo(a)pyrene	150	J
193-39-5	Indeno(1,2,3-cd)pyrene	57	J
53-70-3	Dibenz(a,h)anthracene	400	U
191-24-2	Benzo(g,h,i)perylene	41	J

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SB5402

Lab Name: NYTEST ENV INC Contract: 9421375

Lab Code: NYTEST Case No.: 22303 SAS No.: SDG No.: SKIN3

Matrix: (soil/water) SOIL Lab Sample ID: 2230312

Sample wt/vol: 30.0 (g/mL) G Lab File ID: S1640.D

Level: (low/med) LOW Date Received: 10/15/94

% Moisture: 19 decanted: (Y/N) N Date Extracted: 10/20/94

Concentrated Extract Volume: 500 (UL) Date Analyzed: 11/24/94

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
91-20-3	Naphthalene	410	U
208-96-8	Acenaphthylene	410	U
83-32-9	Acenaphthene	410	U
86-73-7	Fluorene	410	U
85-01-8	Phenanthrene	220	J
120-12-7	Anthracene	410	U
206-44-0	Fluoranthene	390	J
129-00-0	Pyrene	330	J
56-55-3	Benzo(a)anthracene	150	J
218-01-9	Chrysene	170	J
205-99-2	Benzo(b)fluoranthene	130	J
207-08-9	Benzo(k)fluoranthene	120	J
50-32-8	Benzo(a)pyrene	99	J
193-39-5	Indeno(1,2,3-cd)pyrene	410	U
53-70-3	Dibenz(a,h)anthracene	410	U
191-24-2	Benzo(g,h,i)perylene	410	U

1B

EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

SB5403

Lab Name: NYTEST ENV INC Contract: 9421375

Lab Code: NYTEST Case No.: 22303 SAS No.: SDG No.: SKIN3

Matrix: (soil/water) SOIL Lab Sample ID: 2230313

Sample wt/vol: 30.0 (g/mL) G Lab File ID: S1641.D

Level: (low/med) LOW Date Received: 10/15/94

% Moisture: 20 decanted: (Y/N) N Date Extracted:10/20/94

Concentrated Extract Volume: 500(UL) Date Analyzed: 11/24/94

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
91-20-3	Naphthalene	420	U
208-96-8	Acenaphthylene	420	U
83-32-9	Acenaphthene	420	U
86-73-7	Fluorene	420	U
85-01-8	Phenanthrene	130	J
120-12-7	Anthracene	420	U
206-44-0	Fluoranthene	280	J
129-00-0	Pyrene	240	J
56-55-3	Benzo(a)anthracene	100	J
218-01-9	Chrysene	130	J
205-99-2	Benzo(b)fluoranthene	83	J
207-08-9	Benzo(k)fluoranthene	130	J
50-32-8	Benzo(a)pyrene	77	J
193-39-5	Indeno(1,2,3-cd)pyrene	420	U
53-70-3	Dibenz(a,h)anthracene	420	U
191-24-2	Benzo(g,h,i)perylene	420	U

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SB5501

Lab Name: NYTEST ENV INC Contract: 9421375

Lab Code: NYTEST Case No.: 22288 SAS No.: SDG No.: SKIN2

Matrix: (soil/water) SOIL Lab Sample ID: 2230201

Sample wt/vol: 30.0 (g/mL) G Lab File ID: R1539.D

Level: (low/med) LOW Date Received: 10/15/94

% Moisture: 16 decanted: (Y/N) N Date Extracted: 10/19/94

Concentrated Extract Volume: 500(UL) Date Analyzed: 11/25/94

Injection Volume: 2.0(uL) Dilution Factor: 10.0

GPC Cleanup: (Y/N) Y pH: 7.6

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
91-20-3	Naphthalene	4000	U
208-96-8	Acenaphthylene	4000	U
83-32-9	Acenaphthene	4000	U
86-73-7	Fluorene	4000	U
85-01-8	Phenanthrene	3600	J
120-12-7	Anthracene	400	J
206-44-0	Fluoranthene	6100	
129-00-0	Pyrene	5500	
56-55-3	Benzo(a)anthracene	2300	J
218-01-9	Chrysene	2900	J
205-99-2	Benzo(b)fluoranthene	1400	J
207-08-9	Benzo(k)fluoranthene	1500	J
50-32-8	Benzo(a)pyrene	1400	J
193-39-5	Indeno(1,2,3-cd)pyrene	1000	J
53-70-3	Dibenz(a,h)anthracene	4000	U
191-24-2	Benzo(g,h,i)perylene	1100	J

1B

EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

SB5502

Lab Name: NYTEST ENV INC Contract: 9421375

Lab Code: NYTEST Case No.: 22288 SAS No.: SDG No.: SKIN2

Matrix: (soil/water) SOIL Lab Sample ID: 2230204

Sample wt/vol: 30.0 (g/mL) G Lab File ID: R1542.D

Level: (low/med) LOW Date Received: 10/15/94

% Moisture: 19 decanted: (Y/N) N Date Extracted:10/19/94

Concentrated Extract Volume: 500(UL) Date Analyzed: 11/25/94

Injection Volume: 2.0(uL) Dilution Factor: 5.0

GPC Cleanup: (Y/N) Y pH: 7.8

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
91-20-3	Naphthalene	2000	U
208-96-8	Acenaphthylene	2000	U
83-32-9	Acenaphthene	2000	U
86-73-7	Fluorene	2000	U
85-01-8	Phenanthrene	440	J
120-12-7	Anthracene	2000	U
206-44-0	Fluoranthene	990	J
129-00-0	Pyrene	890	J
56-55-3	Benzo(a)anthracene	360	J
218-01-9	Chrysene	490	J
205-99-2	Benzo(b)fluoranthene	270	J
207-08-9	Benzo(k)fluoranthene	250	J
50-32-8	Benzo(a)pyrene	210	J
193-39-5	Indeno(1,2,3-cd)pyrene	2000	U
53-70-3	Dibenz(a,h)anthracene	2000	U
191-24-2	Benzo(g,h,i)perylene	2000	U

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SB5503

Lab Name: NYTEST ENV INC Contract: 9421375

Lab Code: NYTEST Case No.: 22288 SAS No.: SDG No.: SKIN2

Matrix: (soil/water) SOIL Lab Sample ID: 2230205

Sample wt/vol: 30.0 (g/mL) G Lab File ID: R1543.D

Level: (low/med) LOW Date Received: 10/15/94

% Moisture: 20 decanted: (Y/N) N Date Extracted:10/19/94

Concentrated Extract Volume: 500(UL) Date Analyzed: 11/25/94

Injection Volume: 2.0(uL) Dilution Factor: 2.0

GPC Cleanup: (Y/N) Y pH: 7.5

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
91-20-3	Naphthalene	830	U
208-96-8	Acenaphthylene	830	U
83-32-9	Acenaphthene	830	U
86-73-7	Fluorene	830	U
85-01-8	Phenanthrene	440	J
120-12-7	Anthracene	830	U
206-44-0	Fluoranthene	980	
129-00-0	Pyrene	880	
56-55-3	Benzo(a)anthracene	370	J
218-01-9	Chrysene	500	J
205-99-2	Benzo(b)fluoranthene	260	J
207-08-9	Benzo(k)fluoranthene	230	J
50-32-8	Benzo(a)pyrene	220	J
193-39-5	Indeno(1,2,3-cd)pyrene	160	J
53-70-3	Dibenz(a,h)anthracene	830	U
191-24-2	Benzo(g,h,i)perylene	170	J

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SB5601

Lab Name: NYTEST ENV INC Contract: 9421375

Lab Code: NYTEST Case No.: 22471 SAS No.: SDG No.: SKIN5

Matrix: (soil/water) SOIL Lab Sample ID: 2247101

Sample wt/vol: 30.0 (g/mL) G Lab File ID: Q1998.D

Level: (low/med) LOW Date Received: 11/05/94

% Moisture: 4 decanted: (Y/N) N Date Extracted:11/07/94

Concentrated Extract Volume: 500(UL) Date Analyzed: 12/08/94

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 7.1

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	350	U
111-44-4	bis(2-Chloroethyl)Ether	350	U
95-57-8	2-Chlorophenol	350	U
541-73-1	1,3-Dichlorobenzene	350	U
106-46-7	1,4-Dichlorobenzene	350	U
95-50-1	1,2-Dichlorobenzene	350	U
95-48-7	2-Methylphenol	350	U
108-60-1	2,2'-oxybis(1-Chloropropane)	350	U
106-44-5	4-Methylphenol	350	U
621-64-7	N-Nitroso-di-n-propylamine	350	U
67-72-1	Hexachloroethane	350	U
98-95-3	Nitrobenzene	350	U
78-59-1	Isophorone	350	U
88-75-5	2-Nitrophenol	350	U
105-67-9	2,4-Dimethylphenol	350	U
120-83-2	2,4-Dichlorophenol	350	U
120-82-1	1,2,4-Trichlorobenzene	350	U
91-20-3	Naphthalene	350	U
106-47-8	4-Chloroaniline	350	U
87-68-3	Hexachlorobutadiene	350	U
111-91-1	bis(2-Chloroethoxy)methane	350	U
59-50-7	4-Chloro-3-Methylphenol	350	U
91-57-6	2-Methylnaphthalene	350	U
77-47-4	Hexachlorocyclopentadiene	350	U
88-06-2	2,4,6-Trichlorophenol	350	U
95-95-4	2,4,5-Trichlorophenol	830	U
91-58-7	2-Chloronaphthalene	350	U
88-74-4	2-Nitroaniline	830	U
131-11-3	Dimethylphthalate	350	U
208-96-8	Acenaphthylene	350	U
606-20-2	2,6-Dinitrotoluene	350	U
99-09-2	3-Nitroaniline	830	U
83-32-9	Acenaphthene	350	U

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SB5601

Lab Name: NYTEST ENV INC Contract: 9421375

Lab Code: NYTEST Case No.: 22471 SAS No.: SDG No.: SKIN5

Matrix: (soil/water) SOIL Lab Sample ID: 2247101

Sample wt/vol: 30.0 (g/mL) G Lab File ID: Q1998.D

Level: (low/med) LOW Date Received: 11/05/94

% Moisture: 4 decanted: (Y/N) N Date Extracted:11/07/94

Concentrated Extract Volume: 500(UL) Date Analyzed: 12/08/94

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 7.1

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
51-28-5	2,4-Dinitrophenol	830	U
100-02-7	4-Nitrophenol	830	U
132-64-9	Dibenzofuran	350	U
121-14-2	2,4-Dinitrotoluene	350	U
84-66-2	Diethylphthalate	350	U
7005-72-3	4-Chlorophenyl-phenylether	350	U
86-73-7	Fluorene	350	U
100-01-6	4-Nitroaniline	830	U
534-52-1	4,6-Dinitro-2-methylphenol	830	U
86-30-6	N-Nitrosodiphenylamine (1)	350	U
101-55-3	4-Bromophenyl-phenylether	350	U
118-74-1	Hexachlorobenzene	350	U
87-86-5	Pentachlorophenol	830	U
85-01-8	Phenanthrene	350	U
120-12-7	Anthracene	350	U
86-74-8	Carbazole	350	U
84-74-2	Di-n-butylphthalate	350	U
206-44-0	Fluoranthene	350	U
129-00-0	Pyrene	350	U
85-68-7	Butylbenzylphthalate	350	U
91-94-1	3,3'-Dichlorobenzidine	350	U
56-55-3	Benzo(a)anthracene	350	U
218-01-9	Chrysene	350	U
117-81-7	bis(2-Ethylhexyl)phthalate	350	U
117-84-0	Di-n-octylphthalate	350	U
205-99-2	Benzo(b)fluoranthene	350	U
207-08-9	Benzo(k)fluoranthene	350	U
50-32-8	Benzo(a)pyrene	350	U
193-39-5	Indeno(1,2,3-cd)pyrene	350	U
53-70-3	Dibenz(a,h)anthracene	350	U
191-24-2	Benzo(g,h,i)perylene	350	U

(1) - Cannot be separated from Diphenylamine

1F

EPA SAMPLE NO.

SB5601

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: NYTEST ENV INC Contract: 9421375

Lab Code: NYTEST Case No.: 22471 SAS No.: SDG No.: SKIN5

Matrix: (soil/water) SOIL Lab Sample ID: 2247101

Sample wt/vol: 30.0 (g/mL) G Lab File ID: Q1998.D

Level: (low/med) LOW Date Received: 11/05/94

% Moisture: 4 decanted: (Y/N) N Date Extracted:11/07/94

Concentrated Extract Volume: 500(uL) Date Analyzed: 12/08/94

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 7.1

Number TICs found: 3

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		UNKNOWN	3.264	83	J
2.		UNKNOWN	3.680	5400	AJ
3.		UNKNOWN HYDROCARBON	21.269	72	J
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SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SB5602

Lab Name: NYTEST ENV INC Contract: 9421375

Lab Code: NYTEST Case No.: 22471 SAS No.: SDG No.: SKIN5

Matrix: (soil/water) SOIL Lab Sample ID: 2247102

Sample wt/vol: 30.0 (g/mL) G Lab File ID: Q1999.D

Level: (low/med) LOW Date Received: 11/05/94

% Moisture: 5 decanted: (Y/N) N Date Extracted:11/07/94

Concentrated Extract Volume: 500(UL) Date Analyzed: 12/08/94

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 6.9

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	350	U
111-44-4	bis(2-Chloroethyl)Ether	350	U
95-57-8	2-Chlorophenol	350	U
541-73-1	1,3-Dichlorobenzene	350	U
106-46-7	1,4-Dichlorobenzene	350	U
95-50-1	1,2-Dichlorobenzene	350	U
95-48-7	2-Methylphenol	350	U
108-60-1	2,2'-oxybis(1-Chloropropane)	350	U
106-44-5	4-Methylphenol	350	U
621-64-7	N-Nitroso-di-n-propylamine	350	U
67-72-1	Hexachloroethane	350	U
98-95-3	Nitrobenzene	350	U
78-59-1	Isophorone	350	U
88-75-5	2-Nitrophenol	350	U
105-67-9	2,4-Dimethylphenol	350	U
120-83-2	2,4-Dichlorophenol	350	U
120-82-1	1,2,4-Trichlorobenzene	350	U
91-20-3	Naphthalene	350	U
106-47-8	4-Chloroaniline	350	U
87-68-3	Hexachlorobutadiene	350	U
111-91-1	bis(2-Chloroethoxy)methane	350	U
59-50-7	4-Chloro-3-Methylphenol	350	U
91-57-6	2-Methylnaphthalene	350	U
77-47-4	Hexachlorocyclopentadiene	350	U
88-06-2	2,4,6-Trichlorophenol	350	U
95-95-4	2,4,5-Trichlorophenol	840	U
91-58-7	2-Chloronaphthalene	350	U
88-74-4	2-Nitroaniline	840	U
131-11-3	Dimethylphthalate	350	U
208-96-8	Acenaphthylene	350	U
606-20-2	2,6-Dinitrotoluene	350	U
99-09-2	3-Nitroaniline	840	U
83-32-9	Acenaphthene	350	U

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SB5602

Lab Name: NYTEST ENV INC Contract: 9421375

Lab Code: NYTEST Case No.: 22471 SAS No.: SDG No.: SKIN5

Matrix: (soil/water) SOIL Lab Sample ID: 2247102

Sample wt/vol: 30.0 (g/mL) G Lab File ID: Q1999.D

Level: (low/med) LOW Date Received: 11/05/94

% Moisture: 5 decanted: (Y/N) N Date Extracted:11/07/94

Concentrated Extract Volume: 500(UL) Date Analyzed: 12/08/94

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 6.9

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
51-28-5	2,4-Dinitrophenol	840	U
100-02-7	4-Nitrophenol	840	U
132-64-9	Dibenzofuran	350	U
121-14-2	2,4-Dinitrotoluene	350	U
84-66-2	Diethylphthalate	350	U
7005-72-3	4-Chlorophenyl-phenylether	350	U
86-73-7	Fluorene	350	U
100-01-6	4-Nitroaniline	840	U
534-52-1	4,6-Dinitro-2-methylphenol	840	U
86-30-6	N-Nitrosodiphenylamine (1)	350	U
101-55-3	4-Bromophenyl-phenylether	350	U
118-74-1	Hexachlorobenzene	350	U
87-86-5	Pentachlorophenol	840	U
85-01-8	Phenanthrene	350	U
120-12-7	Anthracene	350	U
86-74-8	Carbazole	350	U
84-74-2	Di-n-butylphthalate	350	U
206-44-0	Fluoranthene	350	U
129-00-0	Pyrene	350	U
85-68-7	Butylbenzylphthalate	350	U
91-94-1	3,3'-Dichlorobenzidine	350	U
56-55-3	Benzo(a)anthracene	350	U
218-01-9	Chrysene	350	U
117-81-7	bis(2-Ethylhexyl)phthalate	350	U
117-84-0	Di-n-octylphthalate	350	U
205-99-2	Benzo(b)fluoranthene	350	U
207-08-9	Benzo(k)fluoranthene	350	U
50-32-8	Benzo(a)pyrene	350	U
193-39-5	Indeno(1,2,3-cd)pyrene	350	U
53-70-3	Dibenz(a,h)anthracene	350	U
191-24-2	Benzo(g,h,i)perylene	350	U

(1) - Cannot be separated from Diphenylamine

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

SB5602

Lab Name: NYTEST ENV INC Contract: 9421375

Lab Code: NYTEST Case No.: 22471 SAS No.: SDG No.: SKIN5

Matrix: (soil/water) SOIL Lab Sample ID: 2247102

Sample wt/vol: 30.0 (g/mL) G Lab File ID: Q1999.D

Level: (low/med) LOW Date Received: 11/05/94

% Moisture: 5 decanted: (Y/N) N Date Extracted:11/07/94

Concentrated Extract Volume: 500(uL) Date Analyzed: 12/08/94

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 6.9

Number TICs found: 3

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		UNKNOWN	3.244	94	J
2.		UNKNOWN	3.660	4600	JA
3.		UNKNOWN	12.714	83	J
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SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SB5603

Lab Name: NYTEST ENV INC Contract: 9421375

Lab Code: NYTEST Case No.: 22471 SAS No.: SDG No.: SKIN5

Matrix: (soil/water) SOIL Lab Sample ID: 2247103

Sample wt/vol: 30.0 (g/mL) G Lab File ID: Q2000.D

Level: (low/med) LOW Date Received: 11/05/94

% Moisture: 6 decanted: (Y/N) N Date Extracted:11/07/94

Concentrated Extract Volume: 500(UL) Date Analyzed: 12/08/94

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 7.4

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	350	U
111-44-4	bis(2-Chloroethyl)Ether	350	U
95-57-8	2-Chlorophenol	350	U
541-73-1	1,3-Dichlorobenzene	350	U
106-46-7	1,4-Dichlorobenzene	350	U
95-50-1	1,2-Dichlorobenzene	350	U
95-48-7	2-Methylphenol	350	U
108-60-1	2,2'-oxybis(1-Chloropropane)	350	U
106-44-5	4-Methylphenol	350	U
621-64-7	N-Nitroso-di-n-propylamine	350	U
67-72-1	Hexachloroethane	350	U
98-95-3	Nitrobenzene	350	U
78-59-1	Isophorone	350	U
88-75-5	2-Nitrophenol	350	U
105-67-9	2,4-Dimethylphenol	350	U
120-83-2	2,4-Dichlorophenol	350	U
120-82-1	1,2,4-Trichlorobenzene	350	U
91-20-3	Naphthalene	350	U
106-47-8	4-Chloroaniline	350	U
87-68-3	Hexachlorobutadiene	350	U
111-91-1	bis(2-Chloroethoxy)methane	350	U
59-50-7	4-Chloro-3-Methylphenol	350	U
91-57-6	2-Methylnaphthalene	350	U
77-47-4	Hexachlorocyclopentadiene	350	U
88-06-2	2,4,6-Trichlorophenol	350	U
95-95-4	2,4,5-Trichlorophenol	850	U
91-58-7	2-Chloronaphthalene	350	U
88-74-4	2-Nitroaniline	850	U
131-11-3	Dimethylphthalate	350	U
208-96-8	Acenaphthylene	350	U
606-20-2	2,6-Dinitrotoluene	350	U
99-09-2	3-Nitroaniline	850	U
83-32-9	Acenaphthene	350	U

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SB5603

Lab Name: NYTEST ENV INC Contract: 9421375

Lab Code: NYTEST Case No.: 22471 SAS No.: SDG No.: SKIN5

Matrix: (soil/water) SOIL Lab Sample ID: 2247103

Sample wt/vol: 30.0 (g/mL) G Lab File ID: Q2000.D

Level: (low/med) LOW Date Received: 11/05/94

% Moisture: 6 decanted: (Y/N) N Date Extracted: 11/07/94

Concentrated Extract Volume: 500(UL) Date Analyzed: 12/08/94

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 7.4

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
51-28-5	2,4-Dinitrophenol	850	U
100-02-7	4-Nitrophenol	850	U
132-64-9	Dibenzofuran	350	U
121-14-2	2,4-Dinitrotoluene	350	U
84-66-2	Diethylphthalate	350	U
7005-72-3	4-Chlorophenyl-phenylether	350	U
86-73-7	Fluorene	350	U
100-01-6	4-Nitroaniline	850	U
534-52-1	4,6-Dinitro-2-methylphenol	850	U
86-30-6	N-Nitrosodiphenylamine (1)	350	U
101-55-3	4-Bromophenyl-phenylether	350	U
118-74-1	Hexachlorobenzene	350	U
87-86-5	Pentachlorophenol	850	U
85-01-8	Phenanthrene	350	U
120-12-7	Anthracene	350	U
86-74-8	Carbazole	350	U
84-74-2	Di-n-butylphthalate	350	U
206-44-0	Fluoranthene	350	U
129-00-0	Pyrene	350	U
85-68-7	Butylbenzylphthalate	350	U
91-94-1	3,3'-Dichlorobenzidine	350	U
56-55-3	Benzo(a)anthracene	350	U
218-01-9	Chrysene	350	U
117-81-7	bis(2-Ethylhexyl)phthalate	350	U
117-84-0	Di-n-octylphthalate	350	U
205-99-2	Benzo(b)fluoranthene	350	U
207-08-9	Benzo(k)fluoranthene	350	U
50-32-8	Benzo(a)pyrene	350	U
193-39-5	Indeno(1,2,3-cd)pyrene	350	U
53-70-3	Dibenz(a,h)anthracene	350	U
191-24-2	Benzo(g,h,i)perylene	350	U

(1) - Cannot be separated from Diphenylamine

1F

EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

SB5603

Lab Name: NYTEST ENV INC Contract: 9421375

Lab Code: NYTEST Case No.: 22471 SAS No.: SDG No.: SKIN5

Matrix: (soil/water) SOIL Lab Sample ID: 2247103

Sample wt/vol: 30.0 (g/mL) G Lab File ID: Q2000.D

Level: (low/med) LOW Date Received: 11/05/94

% Moisture: 6 decanted: (Y/N) N Date Extracted:11/07/94

Concentrated Extract Volume: 500(uL) Date Analyzed: 12/08/94

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 7.4

Number TICs found: 3

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		UNKNOWN	3.245	99	J
2.		UNKNOWN	3.644	6000	JA
3.		UNKNOWN	12.716	89	J
4.					
5.					
6.					
7.					
8.					
9.					
10.					
11.					
12.					
13.					
14.					
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17.					
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30.					

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SB5701

Lab Name: NYTEST ENV INC Contract: 9421375

Lab Code: NYTEST Case No.: 22288 SAS No.: SDG No.: SKIN2

Matrix: (soil/water) SOIL Lab Sample ID: 2228820

Sample wt/vol: 30.0 (g/mL) G Lab File ID: R1522.D

Level: (low/med) LOW Date Received: 10/13/94

% Moisture: 5 decanted: (Y/N) N Date Extracted:10/18/94

Concentrated Extract Volume: 500(UL) Date Analyzed: 11/24/94

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 6.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
91-20-3	Naphthalene	95	J
208-96-8	Acenaphthylene	350	U
83-32-9	Acenaphthene	350	U
86-73-7	Fluorene	350	U
85-01-8	Phenanthrene	350	U
120-12-7	Anthracene	350	U
206-44-0	Fluoranthene	350	U
129-00-0	Pyrene	350	U
56-55-3	Benzo(a)anthracene	350	U
218-01-9	Chrysene	350	U
205-99-2	Benzo(b)fluoranthene	350	U
207-08-9	Benzo(k)fluoranthene	350	U
50-32-8	Benzo(a)pyrene	350	U
193-39-5	Indeno(1,2,3-cd)pyrene	350	U
53-70-3	Dibenz(a,h)anthracene	350	U
191-24-2	Benzo(g,h,i)perylene	350	U

1B

EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

SB5702

Lab Name: NYTEST ENV INC Contract: 9421375

Lab Code: NYTEST Case No.: 22288 SAS No.: SDG No.: SKIN2

Matrix: (soil/water) SOIL Lab Sample ID: 2228822

Sample wt/vol: 30.0 (g/mL) G Lab File ID: R1525.D

Level: (low/med) LOW Date Received: 10/13/94

% Moisture: 5 decanted: (Y/N) N Date Extracted:10/18/94

Concentrated Extract Volume: 500(UL) Date Analyzed: 11/24/94

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 6.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
91-20-3	Naphthalene	350	U
208-96-8	Acenaphthylene	350	U
83-32-9	Acenaphthene	350	U
86-73-7	Fluorene	350	U
85-01-8	Phenanthrene	350	U
120-12-7	Anthracene	350	U
206-44-0	Fluoranthene	350	U
129-00-0	Pyrene	350	U
56-55-3	Benzo(a)anthracene	350	U
218-01-9	Chrysene	350	U
205-99-2	Benzo(b)fluoranthene	350	U
207-08-9	Benzo(k)fluoranthene	350	U
50-32-8	Benzo(a)pyrene	350	U
193-39-5	Indeno(1,2,3-cd)pyrene	350	U
53-70-3	Dibenz(a,h)anthracene	350	U
191-24-2	Benzo(g,h,i)perylene	350	U

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SB5703

Lab Name: NYTEST ENV INC Contract: 9421375

Lab Code: NYTEST Case No.: 22288 SAS No.: SDG No.: SKIN2

Matrix: (soil/water) SOIL Lab Sample ID: 2228819

Sample wt/vol: 30.0 (g/mL) G Lab File ID: R1521.D

Level: (low/med) LOW Date Received: 10/13/94

% Moisture: 6 decanted: (Y/N) N Date Extracted:10/18/94

Concentrated Extract Volume: 500(UL) Date Analyzed: 11/24/94

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 6.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
91-20-3	Naphthalene	41	J
208-96-8	Acenaphthylene	350	U
83-32-9	Acenaphthene	350	U
86-73-7	Fluorene	350	U
85-01-8	Phenanthrene	350	U
120-12-7	Anthracene	350	U
206-44-0	Fluoranthene	350	U
129-00-0	Pyrene	350	U
56-55-3	Benzo(a)anthracene	350	U
218-01-9	Chrysene	350	U
205-99-2	Benzo(b)fluoranthene	350	U
207-08-9	Benzo(k)fluoranthene	350	U
50-32-8	Benzo(a)pyrene	350	U
193-39-5	Indeno(1,2,3-cd)pyrene	350	U
53-70-3	Dibenz(a,h)anthracene	350	U
191-24-2	Benzo(g,h,i)perylene	350	U

1B

EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

SB5801

Lab Name: NYTEST ENV INC Contract: 9421375

Lab Code: NYTEST Case No.: 22288 SAS No.: SDG No.: SKIN2

Matrix: (soil/water) SOIL Lab Sample ID: 2228814

Sample wt/vol: 30.0 (g/mL) G Lab File ID: R1512.D

Level: (low/med) LOW Date Received: 10/13/94

% Moisture: 5 decanted: (Y/N) N Date Extracted:10/18/94

Concentrated Extract Volume: 500(UL) Date Analyzed: 11/23/94

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 6.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
91-20-3	Naphthalene	350	U
208-96-8	Acenaphthylene	350	U
83-32-9	Acenaphthene	350	U
86-73-7	Fluorene	350	U
85-01-8	Phenanthrene	350	U
120-12-7	Anthracene	350	U
206-44-0	Fluoranthene	350	U
129-00-0	Pyrene	350	U
56-55-3	Benzo(a)anthracene	350	U
218-01-9	Chrysene	350	U
205-99-2	Benzo(b)fluoranthene	350	U
207-08-9	Benzo(k)fluoranthene	350	U
50-32-8	Benzo(a)pyrene	350	U
193-39-5	Indeno(1,2,3-cd)pyrene	350	U
53-70-3	Dibenz(a,h)anthracene	350	U
191-24-2	Benzo(g,h,i)perylene	350	U

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SB5802

Lab Name: NYTEST ENV INC Contract: 9421375

Lab Code: NYTEST Case No.: 22288 SAS No.: SDG No.: SKIN2

Matrix: (soil/water) SOIL Lab Sample ID: 2228817

Sample wt/vol: 30.0 (g/mL) G Lab File ID: R1515.D

Level: (low/med) LOW Date Received: 10/13/94

% Moisture: 6 decanted: (Y/N) N Date Extracted:10/18/94

Concentrated Extract Volume: 500(UL) Date Analyzed: 11/23/94

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 6.2

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
91-20-3	Naphthalene	350	U
208-96-8	Acenaphthylene	350	U
83-32-9	Acenaphthene	350	U
86-73-7	Fluorene	350	U
85-01-8	Phenanthrene	350	U
120-12-7	Anthracene	350	U
206-44-0	Fluoranthene	350	U
129-00-0	Pyrene	350	U
56-55-3	Benzo(a)anthracene	350	U
218-01-9	Chrysene	350	U
205-99-2	Benzo(b)fluoranthene	350	U
207-08-9	Benzo(k)fluoranthene	350	U
50-32-8	Benzo(a)pyrene	350	U
193-39-5	Indeno(1,2,3-cd)pyrene	350	U
53-70-3	Dibenz(a,h)anthracene	350	U
191-24-2	Benzo(g,h,i)perylene	350	U

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SB5803

Lab Name: NYTEST ENV INC Contract: 9421375

Lab Code: NYTEST Case No.: 22288 SAS No.: SDG No.: SKIN2

Matrix: (soil/water) SOIL Lab Sample ID: 2228813

Sample wt/vol: 30.0 (g/mL) G Lab File ID: R1511.D

Level: (low/med) LOW Date Received: 10/13/94

% Moisture: 8 decanted: (Y/N) N Date Extracted:10/18/94

Concentrated Extract Volume: 500(UL) Date Analyzed: 11/23/94

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 5.9

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
91-20-3	Naphthalene	360	U
208-96-8	Acenaphthylene	360	U
83-32-9	Acenaphthene	360	U
86-73-7	Fluorene	360	U
85-01-8	Phenanthrene	360	U
120-12-7	Anthracene	360	U
206-44-0	Fluoranthene	360	U
129-00-0	Pyrene	360	U
56-55-3	Benzo(a)anthracene	360	U
218-01-9	Chrysene	360	U
205-99-2	Benzo(b)fluoranthene	360	U
207-08-9	Benzo(k)fluoranthene	360	U
50-32-8	Benzo(a)pyrene	360	U
193-39-5	Indeno(1,2,3-cd)pyrene	360	U
53-70-3	Dibenz(a,h)anthracene	360	U
191-24-2	Benzo(g,h,i)perylene	360	U

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SB5901

Lab Name: NYTEST ENV INC Contract: 9421375

Lab Code: NYTEST Case No.: 22288 SAS No.: SDG No.: SKIN2

Matrix: (soil/water) SOIL Lab Sample ID: 2228808

Sample wt/vol: 30.0 (g/mL) G Lab File ID: R1506.D

Level: (low/med) LOW Date Received: 10/13/94

% Moisture: 3 decanted: (Y/N) N Date Extracted:10/18/94

Concentrated Extract Volume: 500(UL) Date Analyzed: 11/23/94

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 6.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
91-20-3	Naphthalene	340	U
208-96-8	Acenaphthylene	340	U
83-32-9	Acenaphthene	340	U
86-73-7	Fluorene	340	U
85-01-8	Phenanthrene	340	U
120-12-7	Anthracene	340	U
206-44-0	Fluoranthene	340	U
129-00-0	Pyrene	340	U
56-55-3	Benzo(a)anthracene	340	U
218-01-9	Chrysene	340	U
205-99-2	Benzo(b)fluoranthene	340	U
207-08-9	Benzo(k)fluoranthene	340	U
50-32-8	Benzo(a)pyrene	340	U
193-39-5	Indeno(1,2,3-cd)pyrene	340	U
53-70-3	Dibenz(a,h)anthracene	340	U
191-24-2	Benzo(g,h,i)perylene	340	U

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SB8001

Lab Name: NYTEST ENV INC Contract: 9421375

Lab Code: NYTEST Case No.: 22288 SAS No.: SDG No.: SKIN2

Matrix: (soil/water) SOIL Lab Sample ID: 2228816

Sample wt/vol: 30.0 (g/mL) G Lab File ID: R1514.D

Level: (low/med) LOW Date Received: 10/13/94

% Moisture: 14 decanted: (Y/N) N Date Extracted:10/18/94

Concentrated Extract Volume: 500(UL) Date Analyzed: 11/23/94

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 5.8

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
91-20-3	Naphthalene	390	U
208-96-8	Acenaphthylene	50	J
83-32-9	Acenaphthene	390	U
86-73-7	Fluorene	390	U
85-01-8	Phenanthrene	620	
120-12-7	Anthracene	110	J
206-44-0	Fluoranthene	790	
129-00-0	Pyrene	960	
56-55-3	Benzo(a)anthracene	540	
218-01-9	Chrysene	630	
205-99-2	Benzo(b)fluoranthene	320	J
207-08-9	Benzo(k)fluoranthene	290	J
50-32-8	Benzo(a)pyrene	310	J
193-39-5	Indeno(1,2,3-cd)pyrene	140	J
53-70-3	Dibenz(a,h)anthracene	390	U
191-24-2	Benzo(g,h,i)perylene	150	J

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SB8002

Lab Name: NYTEST ENV INC Contract: 9421375

Lab Code: NYTEST Case No.: 22288 SAS No.: SDG No.: SKIN2

Matrix: (soil/water) SOIL Lab Sample ID: 2228821

Sample wt/vol: 30.0 (g/mL) G Lab File ID: R1523.D

Level: (low/med) LOW Date Received: 10/13/94

% Moisture: 8 decanted: (Y/N) N Date Extracted:10/18/94

Concentrated Extract Volume: 500(UL) Date Analyzed: 11/24/94

Injection Volume: 2.0(uL) Dilution Factor: 2.0

GPC Cleanup: (Y/N) Y pH: 4.9

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
91-20-3	Naphthalene	90	J
208-96-8	Acenaphthylene	720	U
83-32-9	Acenaphthene	720	U
86-73-7	Fluorene	720	U
85-01-8	Phenanthrene	360	J
120-12-7	Anthracene	720	U
206-44-0	Fluoranthene	570	J
129-00-0	Pyrene	560	J
56-55-3	Benzo(a)anthracene	290	J
218-01-9	Chrysene	390	J
205-99-2	Benzo(b)fluoranthene	370	J
207-08-9	Benzo(k)fluoranthene	180	J
50-32-8	Benzo(a)pyrene	190	J
193-39-5	Indeno(1,2,3-cd)pyrene	180	J
53-70-3	Dibenz(a,h)anthracene	720	U
191-24-2	Benzo(g,h,i)perylene	250	J

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SB8003

Lab Name: NYTEST ENV INC Contract: 9421375

Lab Code: NYTEST Case No.: 22288 SAS No.: SDG No.: SKIN2

Matrix: (soil/water) SOIL Lab Sample ID: 2228818

Sample wt/vol: 30.0 (g/mL) G Lab File ID: R1516.D

Level: (low/med) LOW Date Received: 10/13/94

% Moisture: 8 decanted: (Y/N) N Date Extracted:10/18/94

Concentrated Extract Volume: 500(UL) Date Analyzed: 11/23/94

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 5.6

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
91-20-3	Naphthalene	360	U
208-96-8	Acenaphthylene	360	U
83-32-9	Acenaphthene	360	U
86-73-7	Fluorene	360	U
85-01-8	Phenanthrene	140	J
120-12-7	Anthracene	360	U
206-44-0	Fluoranthene	230	J
129-00-0	Pyrene	280	J
56-55-3	Benzo(a)anthracene	140	J
218-01-9	Chrysene	190	J
205-99-2	Benzo(b)fluoranthene	110	J
207-08-9	Benzo(k)fluoranthene	120	J
50-32-8	Benzo(a)pyrene	91	J
193-39-5	Indeno(1,2,3-cd)pyrene	76	J
53-70-3	Dibenz(a,h)anthracene	360	U
191-24-2	Benzo(g,h,i)perylene	100	J

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SB8101

Lab Name: NYTEST ENV INC Contract: 9421375

Lab Code: NYTEST Case No.: 22288 SAS No.: SDG No.: SKIN2

Matrix: (soil/water) SOIL Lab Sample ID: 2228810

Sample wt/vol: 30.0 (g/mL) G Lab File ID: R1508.D

Level: (low/med) LOW Date Received: 10/13/94

% Moisture: 10 decanted: (Y/N) N Date Extracted:10/18/94

Concentrated Extract Volume: 500(UL) Date Analyzed: 11/23/94

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 5.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
91-20-3	Naphthalene	370	U
208-96-8	Acenaphthylene	370	U
83-32-9	Acenaphthene	370	U
86-73-7	Fluorene	370	U
85-01-8	Phenanthrene	160	J
120-12-7	Anthracene	370	U
206-44-0	Fluoranthene	290	J
129-00-0	Pyrene	260	J
56-55-3	Benzo(a)anthracene	130	J
218-01-9	Chrysene	160	J
205-99-2	Benzo(b)fluoranthene	99	J
207-08-9	Benzo(k)fluoranthene	79	J
50-32-8	Benzo(a)pyrene	77	J
193-39-5	Indeno(1,2,3-cd)pyrene	54	J
53-70-3	Dibenz(a,h)anthracene	370	U
191-24-2	Benzo(g,h,i)perylene	63	J

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SB8102

Lab Name: NYTEST ENV INC Contract: 9421375

Lab Code: NYTEST Case No.: 22288 SAS No.: SDG No.: SKIN2

Matrix: (soil/water) SOIL Lab Sample ID: 2228805

Sample wt/vol: 30.0 (g/mL) G Lab File ID: R1476.D

Level: (low/med) LOW Date Received: 10/13/94

% Moisture: 6 decanted: (Y/N) N Date Extracted:10/18/94

Concentrated Extract Volume: 500(UL) Date Analyzed: 11/22/94

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 5.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
91-20-3	Naphthalene	350	U
208-96-8	Acenaphthylene	350	U
83-32-9	Acenaphthene	350	U
86-73-7	Fluorene	350	U
85-01-8	Phenanthrene	81	J
120-12-7	Anthracene	350	U
206-44-0	Fluoranthene	180	J
129-00-0	Pyrene	170	J
56-55-3	Benzo(a)anthracene	100	J
218-01-9	Chrysene	120	J
205-99-2	Benzo(b)fluoranthene	73	J
207-08-9	Benzo(k)fluoranthene	64	J
50-32-8	Benzo(a)pyrene	71	J
193-39-5	Indeno(1,2,3-cd)pyrene	43	J
53-70-3	Dibenz(a,h)anthracene	350	U
191-24-2	Benzo(g,h,i)perylene	47	J

1B

EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

SB8103

Lab Name: NYTEST ENV INC Contract: 9421375

Lab Code: NYTEST Case No.: 22288 SAS No.: SDG No.: SKIN2

Matrix: (soil/water) SOIL Lab Sample ID: 2228809

Sample wt/vol: 30.0 (g/mL) G Lab File ID: R1507.D

Level: (low/med) LOW Date Received: 10/13/94

% Moisture: 12 decanted: (Y/N) N Date Extracted:10/18/94

Concentrated Extract Volume: 500(UL) Date Analyzed: 11/23/94

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 5.8

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
91-20-3	Naphthalene	380	U
208-96-8	Acenaphthylene	380	U
83-32-9	Acenaphthene	380	U
86-73-7	Fluorene	380	U
85-01-8	Phenanthrene	58	J
120-12-7	Anthracene	380	U
206-44-0	Fluoranthene	110	J
129-00-0	Pyrene	100	J
56-55-3	Benzo(a)anthracene	56	J
218-01-9	Chrysene	76	J
205-99-2	Benzo(b)fluoranthene	47	J
207-08-9	Benzo(k)fluoranthene	38	J
50-32-8	Benzo(a)pyrene	380	U
193-39-5	Indeno(1,2,3-cd)pyrene	380	U
53-70-3	Dibenz(a,h)anthracene	380	U
191-24-2	Benzo(g,h,i)perylene	380	U

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SB8201

Lab Name: NYTEST ENV INC Contract: 9421375

Lab Code: NYTEST Case No.: 22288 SAS No.: SDG No.: SKIN2

Matrix: (soil/water) SOIL Lab Sample ID: 2228812

Sample wt/vol: 30.0 (g/mL) G Lab File ID: R1510.D

Level: (low/med) LOW Date Received: 10/13/94

% Moisture: 12 decanted: (Y/N) N Date Extracted: 10/18/94

Concentrated Extract Volume: 500(UL) Date Analyzed: 11/23/94

Injection Volume: 2.0(uL) Dilution Factor: 5.0

GPC Cleanup: (Y/N) Y pH: 5.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
91-20-3	Naphthalene	1900	U
208-96-8	Acenaphthylene	1900	U
83-32-9	Acenaphthene	1900	U
86-73-7	Fluorene	1900	U
85-01-8	Phenanthrene	960	J
120-12-7	Anthracene	1900	U
206-44-0	Fluoranthene	2000	
129-00-0	Pyrene	1700	J
56-55-3	Benzo(a)anthracene	840	J
218-01-9	Chrysene	1100	J
205-99-2	Benzo(b)fluoranthene	690	J
207-08-9	Benzo(k)fluoranthene	580	J
50-32-8	Benzo(a)pyrene	580	J
193-39-5	Indeno(1,2,3-cd)pyrene	450	J
53-70-3	Dibenz(a,h)anthracene	1900	U
191-24-2	Benzo(g,h,i)perylene	520	J

1B

EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

SB8202

Lab Name: NYTEST ENV INC Contract: 9421375

Lab Code: NYTEST Case No.: 22288 SAS No.: SDG No.: SKIN2

Matrix: (soil/water) SOIL Lab Sample ID: 2228815

Sample wt/vol: 30.0 (g/mL) G Lab File ID: R1513.D

Level: (low/med) LOW Date Received: 10/13/94

% Moisture: 9 decanted: (Y/N) N Date Extracted:10/18/94

Concentrated Extract Volume: 500(UL) Date Analyzed: 11/23/94

Injection Volume: 2.0(uL) Dilution Factor: 5.0

GPC Cleanup: (Y/N) Y pH: 4.9

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
91-20-3	Naphthalene	1800	U
208-96-8	Acenaphthylene	1800	U
83-32-9	Acenaphthene	1800	U
86-73-7	Fluorene	1800	U
85-01-8	Phenanthrene	2000	
120-12-7	Anthracene	340	J
206-44-0	Fluoranthene	4200	
129-00-0	Pyrene	3900	
56-55-3	Benzo(a)anthracene	1900	
218-01-9	Chrysene	2500	
205-99-2	Benzo(b)fluoranthene	1600	J
207-08-9	Benzo(k)fluoranthene	1200	J
50-32-8	Benzo(a)pyrene	1400	J
193-39-5	Indeno(1,2,3-cd)pyrene	970	J
53-70-3	Dibenz(a,h)anthracene	1800	U
191-24-2	Benzo(g,h,i)perylene	1000	J

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SB8203

Lab Name: NYTEST ENV INC Contract: 9421375

Lab Code: NYTEST Case No.: 22288 SAS No.: SDG No.: SKIN2

Matrix: (soil/water) SOIL Lab Sample ID: 2228804

Sample wt/vol: 30.0 (g/mL) G Lab File ID: R1475.D

Level: (low/med) LOW Date Received: 10/13/94

% Moisture: 8 decanted: (Y/N) N Date Extracted: 10/18/94

Concentrated Extract Volume: 500 (UL) Date Analyzed: 11/22/94

Injection Volume: 2.0 (uL) Dilution Factor: 2.0

GPC Cleanup: (Y/N) Y pH: 6.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
91-20-3	Naphthalene	76	J
208-96-8	Acenaphthylene	94	J
83-32-9	Acenaphthene	96	J
86-73-7	Fluorene	89	J
85-01-8	Phenanthrene	990	
120-12-7	Anthracene	200	J
206-44-0	Fluoranthene	1900	
129-00-0	Pyrene	1900	
56-55-3	Benzo(a)anthracene	1000	
218-01-9	Chrysene	1300	
205-99-2	Benzo(b)fluoranthene	750	
207-08-9	Benzo(k)fluoranthene	660	J
50-32-8	Benzo(a)pyrene	720	J
193-39-5	Indeno(1,2,3-cd)pyrene	480	J
53-70-3	Dibenz(a,h)anthracene	720	U
191-24-2	Benzo(g,h,i)perylene	510	J

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PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SB5001

Lab Name: NYTEST ENV INC Contract: 9421375

Lab Code: NYTEST Case No.: 22288 SAS No.: _____ SDG No.: SKIN2

Matrix: (soil/water) SOIL Lab Sample ID: 2228811

Sample wt/vol: 30.0 (g/mL) G Lab File ID: _____

% Moisture: 11 decanted: (Y/N) N Date Received: 10/13/94

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 10/18/94

Concentrated Extract Volume. 5000 (uL) Date Analyzed: 11/20/94

Injection Volume: 1.00 (uL) Dilution Factor: 1.00

GPC Cleanup: (Y/N) Y pH: 5.0 Sulfur Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q	
~~8001-35-2~~	~~Toxaphene~~	~~190~~	~~U~~	NA QL 12/5/97
12674-11-2	Aroclor-1016	37	U	
11104-28-2	Aroclor-1221	75	U	
11141-16-5	Aroclor-1232	37	U	
53469-21-9	Aroclor-1242	37	U	
12672-29-6	Aroclor-1248	37	U	
11097-69-1	Aroclor-1254	37	U	
11096-82-5	Aroclor-1260	37	U	

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PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SB5002

Lab Name: NYTEST ENV INC Contract: 9421375

Lab Code: NYTEST Case No.: 22288 SAS No.: _____ SDG No.: SKIN2

Matrix: (soil/water) SOIL Lab Sample ID: 2228807

Sample wt/vol: 30.0 (g/mL) G Lab File ID: _____

% Moisture: 10 decanted: (Y/N) N Date Received: 10/13/94

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 10/18/94

Concentrated Extract Volume: 5000 (uL) Date Analyzed: 11/21/94

Injection Volume: 1.00 (uL) Dilution Factor: 1.00

GPC Cleanup: (Y/N) Y pH: 4.9 Sulfur Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q	
~~8001-35-2~~	~~Toxaphene~~	~~190~~	~~U~~	WA 01/12/95
12674-11-2	Aroclor-1016	37	U	
11104-28-2	Aroclor-1221	74	U	
11141-16-5	Aroclor-1232	37	U	
53469-21-9	Aroclor-1242	37	U	
12672-29-6	Aroclor-1248	37	U	
11097-69-1	Aroclor-1254	37	U	
11096-82-5	Aroclor-1260	37	U	

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PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SB5003

Lab Name: NYTEST ENV INC Contract: 9421375

Lab Code: NYTEST Case No.: 22288 SAS No.: _____ SDG No.: SKIN2

Matrix: (soil/water) SOIL Lab Sample ID: 2228801

Sample wt/vol: 30.0 (g/mL) G Lab File ID: _____

% Moisture: 14 decanted: (Y/N) N Date Received: 10/13/94

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 10/18/94

Concentrated Extract Volume: 5000 (uL) Date Analyzed: 11/21/94

Injection Volume: 1.00 (uL) Dilution Factor: 1.00

GPC Cleanup: (Y/N) Y pH: 5.0 Sulfur Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
~~8001-35-2~~	~~Toxaphene~~	~~200~~	~~U~~
12674-11-2	Aroclor-1016	38	U
11104-28-2	Aroclor-1221	78	U
11141-16-5	Aroclor-1232	38	U
53469-21-9	Aroclor-1242	38	U
12672-29-6	Aroclor-1248	38	U
11097-69-1	Aroclor-1254	38	U
11096-82-5	Aroclor-1260	38	U

pd OK 01/9/97

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PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SB5101

Lab Name: NYTEST ENV INC Contract: 9421375

Lab Code: NYTEST Case No.: 22288 SAS No.: _____ SDG No.: SKIN2

Matrix: (soil/water) SOIL Lab Sample ID: 2228803

Sample wt/vol: 30.0 (g/mL) G Lab File ID: _____

% Moisture: 12 decanted: (Y/N) N Date Received: 10/13/94

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 10/18/94

Concentrated Extract Volume: 5000 (uL) Date Analyzed: 11/19/94

Injection Volume: 1.00 (uL) Dilution Factor: 1.00

GPC Cleanup: (Y/N) Y pH: 5.6 Sulfur Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q	
~~8001-35-2~~	~~Toxaphene~~	~~190~~	~~U~~	NA QL 12/8/94
12674-11-2	Aroclor-1016	37	U	
11104-28-2	Aroclor-1221	76	U	
11141-16-5	Aroclor-1232	37	U	
53469-21-9	Aroclor-1242	37	U	
12672-29-6	Aroclor-1248	37	U	
11097-69-1	Aroclor-1254	37	U	
11096-82-5	Aroclor-1260	37	U	

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PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SB5102

Lab Name: NYTEST ENV INC Contract: 9421375

Lab Code: NYTEST Case No.: 22288 SAS No.: _____ SDG No.: SKIN2

Matrix: (soil/water) SOIL Lab Sample ID: 2228802

Sample wt/vol: 30.0 (g/mL) G Lab File ID: _____

% Moisture: 10 decanted: (Y/N) N Date Received: 10/13/94

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 10/18/94

Concentrated Extract Volume: 5000 (uL) Date Analyzed: 11/19/94

Injection Volume: 1.00 (uL) Dilution Factor: 1.00

GPC Cleanup: (Y/N) Y pH: 4.9 Sulfur Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q	
~~8001-35-2~~	~~Toxaphene~~	~~190~~	~~U~~	NY QL 12/5/94
12674-11-2	Aroclor-1016	37	U	
11104-28-2	Aroclor-1221	74	U	
11141-16-5	Aroclor-1232	37	U	
53469-21-9	Aroclor-1242	37	U	
12672-29-6	Aroclor-1248	37	U	
11097-69-1	Aroclor-1254	37	U	
11096-82-5	Aroclor-1260	37	U	

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PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SB5103

Lab Name: NYTEST ENV INC Contract: 9421375

Lab Code: NYTEST Case No.: 22288 SAS No.: _____ SDG No.: SKIN2

Matrix: (soil/water) SOIL Lab Sample ID: 2228806

Sample wt/vol: 30.0 (g/mL) G Lab File ID: _____

% Moisture: 18 decanted: (Y/N) N Date Received: 10/13/94

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 10/18/94

Concentrated Extract Volume: 5000 (uL) Date Analyzed: 11/19/94

Injection Volume: 1.00 (uL) Dilution Factor: 1.00

GPC Cleanup: (Y/N) Y pH: 5.5 Sulfur Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q	
~~8001-35-2~~	~~Toxaphene~~	~~210~~	~~U~~	NA 11-17-94
12674-11-2	Aroclor-1016	40	U	
11104-28-2	Aroclor-1221	82	U	
11141-16-5	Aroclor-1232	40	U	
53469-21-9	Aroclor-1242	40	U	
12672-29-6	Aroclor-1248	40	U	
11097-69-1	Aroclor-1254	40	U	
11096-82-5	Aroclor-1260	40	U	

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PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SB5201

Lab Name: NYTEST ENV INC Contract: 9421375

Lab Code: NYTEST Case No.: 22303 SAS No.: _____ SDG No.: SKIN3

Matrix: (soil/water) SOIL Lab Sample ID: 2230309

Sample wt/vol: 30.0 (g/mL) G Lab File ID: _____

% Moisture: 11 decanted: (Y/N) N Date Received: 10/15/94

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 10/20/94

Concentrated Extract Volume: 5000 (uL) Date Analyzed: 11/24/94

Injection Volume: 1.00 (uL) Dilution Factor: 1.00

GPC Cleanup: (Y/N) Y pH: 6.5 Sulfur Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
~~8001-35-2~~	~~Toxaphene~~	~~190~~	~~U~~
12674-11-2	Aroclor-1016	37	U
11104-28-2	Aroclor-1221	75	U
11141-16-5	Aroclor-1232	37	U
53469-21-9	Aroclor-1242	37	U
12672-29-6	Aroclor-1248	37	U
11097-69-1	Aroclor-1254	18	J
11096-82-5	Aroclor-1260	37	U

NR @ 12/13/94

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PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SB5202

Lab Name: NYTEST ENV INC Contract: 9421375

Lab Code: NYTEST Case No.: 22303 SAS No.: _____ SDG No.: SKIN3

Matrix: (soil/water) SOIL Lab Sample ID: 2230308

Sample wt/vol: 30.0 (g/mL) G Lab File ID: _____

% Moisture: 13 decanted: (Y/N) N Date Received: 10/15/94

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 10/20/94

Concentrated Extract Volume: 5000 (uL) Date Analyzed: 11/26/94

Injection Volume: 1.00 (uL) Dilution Factor: 2.00

GPC Cleanup: (Y/N) Y pH: 6.4 Sulfur Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q	
~~8001-35-2~~	~~Toxaphene~~	~~390~~	~~U~~	WA 12/13/94
12674-11-2	Aroclor-1016	76	U	
11104-28-2	Aroclor-1221	150	U	
11141-16-5	Aroclor-1232	76	U	
53469-21-9	Aroclor-1242	76	U	
12672-29-6	Aroclor-1248	76	U	
11097-69-1	Aroclor-1254	76	U	
11096-82-5	Aroclor-1260	76	U	

000020

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SB5203

Lab Name: NYTEST ENV INC Contract: 9421375

Lab Code: NYTEST Case No.: 22303 SAS No.: _____ SDG No.: SKIN3

Matrix: (soil/water) SOIL Lab Sample ID: 2230306

Sample wt/vol: 30.0 (g/mL) G Lab File ID: _____

% Moisture: 16 decanted: (Y/N) N Date Received: 10/15/94

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 10/20/94

Concentrated Extract Volume: 5000 (uL) Date Analyzed: 11/26/94

Injection Volume: 1.00 (uL) Dilution Factor: 1.00

GPC Cleanup: (Y/N) Y pH: 5.3 Sulfur Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
~~8001-35-2~~	~~Toxaphene~~	~~200~~	~~U~~
12674-11-2	Aroclor-1016	39	U
11104-28-2	Aroclor-1221	80	U
11141-16-5	Aroclor-1232	39	U
53469-21-9	Aroclor-1242	39	U
12672-29-6	Aroclor-1248	39	U
11097-69-1	Aroclor-1254	39	U
11096-82-5	Aroclor-1260	39	U

NA 08 12/8/94

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PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SB5301

Lab Name: NYTEST ENV INC Contract: 9421375

Lab Code: NYTEST Case No.: 22303 SAS No.: _____ SDG No.: SKIN3

Matrix: (soil/water) SOIL Lab Sample ID: 2230301

Sample wt/vol: 30.0 (g/mL) G Lab File ID: _____

% Moisture: 6 decanted: (Y/N) N Date Received: 10/15/94

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 10/20/94

Concentrated Extract Volume: 5000 (uL) Date Analyzed: 11/24/94

Injection Volume: 1.00 (uL) Dilution Factor: 10.0

GPC Cleanup: (Y/N) Y pH: 5.0 Sulfur Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
~~8001-35-2~~	~~Toxaphene~~	~~1800~~	~~U~~
12674-11-2	Aroclor-1016	350	U
11104-28-2	Aroclor-1221	710	U
11141-16-5	Aroclor-1232	350	U
53469-21-9	Aroclor-1242	350	U
12672-29-6	Aroclor-1248	350	U
11097-69-1	Aroclor-1254	350	U
11096-82-5	Aroclor-1260	350	U

WA 12/2/94

000022

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SB5302

Lab Name: NYTEST ENV INC Contract: 9421375

Lab Code: NYTEST Case No.: 22303 SAS No.: _____ SDG No.: SKIN3

Matrix: (soil/water) SOIL Lab Sample ID: 2230302

Sample wt/vol: 30.0 (g/mL) G Lab File ID: _____

% Moisture: 16 decanted: (Y/N) N Date Received: 10/15/94

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 10/20/94

Concentrated Extract Volume: 5000 (uL) Date Analyzed: 11/25/94

Injection Volume: 1.00 (uL) Dilution Factor: 4.00

GPC Cleanup: (Y/N) Y pH: 5.1 Sulfur Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
~~8001-35-2~~	~~Toxaphene~~	~~810~~	~~U~~
12674-11-2	Aroclor-1016	160	U
11104-28-2	Aroclor-1221	320	U
11141-16-5	Aroclor-1232	160	U
53469-21-9	Aroclor-1242	160	U
12672-29-6	Aroclor-1248	160	U
11097-69-1	Aroclor-1254	52	JP
11096-82-5	Aroclor-1260	160	U

MH 12/13/94-1

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SB5303

Lab Name: NYTEST ENV INC Contract: 9421375

Lab Code: NYTEST Case No.: 22303 SAS No.: _____ SDG No.: SKIN3

Matrix: (soil/water) SOIL Lab Sample ID: 2230307

Sample wt/vol: 30.0 (g/mL) G Lab File ID: _____

% Moisture: 15 decanted: (Y/N) N Date Received: 10/15/94

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 10/20/94

Concentrated Extract Volume: 5000 (uL) Date Analyzed: 11/24/94

Injection Volume: 1.00 (uL) Dilution Factor: 5.00

GPC Cleanup: (Y/N) Y pH: 6.2 Sulfur Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
~~8001-35-2~~	~~Toxaphene~~	~~1000~~	~~U~~
12674-11-2	Aroclor-1016	190	U
11104-28-2	Aroclor-1221	390	U
11141-16-5	Aroclor-1232	190	U
53469-21-9	Aroclor-1242	190	U
12672-29-6	Aroclor-1248	190	U
11097-69-1	Aroclor-1254	35	JP
11096-82-5	Aroclor-1260	190	U

NV & OC 12/13/94

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SB5401

Lab Name: NYTEST ENV INC Contract: 9421375

Lab Code: NYTEST Case No.: 22303 SAS No.: _____ SDG No.: SKIN3

Matrix: (soil/water) SOIL Lab Sample ID: 2230303

Sample wt/vol: 30.0 (g/mL) G Lab File ID: _____

% Moisture: 17 decanted: (Y/N) N Date Received: 10/15/94

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 10/20/94

Concentrated Extract Volume: 5000 (uL) Date Analyzed: 11/25/94

Injection Volume: 1.00 (uL) Dilution Factor: 2.00

GPC Cleanup: (Y/N) Y pH: 6.0 Sulfur Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
~~8001-35-2~~	~~Toxaphene~~	~~410~~	~~U~~
12674-11-2	Aroclor-1016	80	U
11104-28-2	Aroclor-1221	160	U
11141-16-5	Aroclor-1232	80	U
53469-21-9	Aroclor-1242	80	U
12672-29-6	Aroclor-1248	80	U
11097-69-1	Aroclor-1254	91	P
11096-82-5	Aroclor-1260	80	U

WA 12/13/94

000025

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SB5402

Lab Name: NYTEST ENV INC Contract: 9421375

Lab Code: NYTEST Case No.: 22303 SAS No.: _____ SDG No.: SKIN3

Matrix: (soil/water) SOIL Lab Sample ID: 2230312

Sample wt/vol: 30.0 (g/mL) G Lab File ID: _____

% Moisture: 19 decanted: (Y/N) N Date Received: 10/15/94

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 10/20/94

Concentrated Extract Volume: 5000 (uL) Date Analyzed: 11/24/94

Injection Volume: 1.00 (uL) Dilution Factor: 1.00

GPC Cleanup: (Y/N) Y pH: 6.9 Sulfur Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q	
~~8001-35-2~~	~~Toxaphene~~	~~210~~	~~U~~	NA 12/13/94
12674-11-2	Aroclor-1016	41	U	
11104-28-2	Aroclor-1221	83	U	
11141-16-5	Aroclor-1232	41	U	
53469-21-9	Aroclor-1242	41	U	
12672-29-6	Aroclor-1248	41	U	
11097-69-1	Aroclor-1254	13	JP	
11096-82-5	Aroclor-1260	41	U	

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1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SB5403

Lab Name: NYTEST ENV INC Contract: 9421375

Lab Code: NYTEST Case No.: 22303 SAS No.: _____ SDG No.: SKIN3

Matrix: (soil/water) SOIL Lab Sample ID: 2230313

Sample wt/vol: 30.0 (g/mL) G Lab File ID: _____

% Moisture: 20 decanted: (Y/N) N Date Received: 10/15/94

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 10/20/94

Concentrated Extract Volume: 5000 (uL) Date Analyzed: 11/24/94

Injection Volume: 1.00 (uL) Dilution Factor: 1.00

GPC Cleanup: (Y/N) Y pH: 6.8 Sulfur Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
~~8001-35-2~~	~~Toxaphene~~	~~210~~	~~U~~
12674-11-2	Aroclor-1016	41	U
11104-28-2	Aroclor-1221	84	U
11141-16-5	Aroclor-1232	41	U
53469-21-9	Aroclor-1242	41	U
12672-29-6	Aroclor-1248	41	U
11097-69-1	Aroclor-1254	24	JP
11096-82-5	Aroclor-1260	41	U

WA 9421213/9

000027

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SB5501

Lab Name: NYTEST ENV INC Contract: 9421375

Lab Code: NYTEST Case No.: 22288 SAS No.: _____ SDG No.: SKIN2

Matrix: (soil/water) SOIL Lab Sample ID: 2230201

Sample wt/vol: 30.0 (g/mL) G Lab File ID: _____

% Moisture: 16 decanted: (Y/N) N Date Received: 10/15/94

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 10/19/94

Concentrated Extract Volume: 5000 (uL) Date Analyzed: 11/27/94

Injection Volume: 1.00 (uL) Dilution Factor: 1.00

GPC Cleanup: (Y/N) Y pH: 7.6 Sulfur Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q	
~~8001-35-2~~	~~Toxaphene~~	~~200~~	~~U~~	NR @ 12/8/00
12674-11-2	Aroclor-1016	39	U	
11104-28-2	Aroclor-1221	80	U	
11141-16-5	Aroclor-1232	39	U	
53469-21-9	Aroclor-1242	39	U	
12672-29-6	Aroclor-1248	39	U	
11097-69-1	Aroclor-1254	39	U	
11096-82-5	Aroclor-1260	39	U	

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SB5502

Lab Name: NYTEST ENV INC Contract: 9421375

Lab Code: NYTEST Case No.: 22288 SAS No.: _____ SDG No.: SKIN2

Matrix: (soil/water) SOIL Lab Sample ID: 2230204

Sample wt/vol: 30.0 (g/mL) G Lab File ID: _____

% Moisture: 19 decanted: (Y/N) N Date Received: 10/15/94

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 10/19/94

Concentrated Extract Volume. 5000 (uL) Date Analyzed: 11/26/94

Injection Volume: 1.00 (uL) Dilution Factor: 1.00

GPC Cleanup: (Y/N) Y pH: 7.8 Sulfur Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q	
~~8001-35-2~~	~~Toxaphene~~	~~210~~	~~U~~	NA 12/15/94
12674-11-2	Aroclor-1016	41	U	
11104-28-2	Aroclor-1221	83	U	
11141-16-5	Aroclor-1232	41	U	
53469-21-9	Aroclor-1242	41	U	
12672-29-6	Aroclor-1248	41	U	
11097-69-1	Aroclor-1254	41	U	
11096-82-5	Aroclor-1260	41	U	

000042

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SB5503

Lab Name: NYTEST ENV INC Contract: 9421375

Lab Code: NYTEST Case No.: 22288 SAS No.: _____ SDG No.: SKIN2

Matrix: (soil/water) SOIL Lab Sample ID: 2230205

Sample wt/vol: 30.0 (g/mL) G Lab File ID: _____

% Moisture: 20 decanted: (Y/N) N Date Received: 10/15/94

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 10/19/94

Concentrated Extract Volume: 5000 (uL) Date Analyzed: 11/27/94

Injection Volume: 1.00 (uL) Dilution Factor: 1.00

GPC Cleanup: (Y/N) Y pH: 7.5 Sulfur Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
~~8001-35-2~~	~~Toxaphene~~	~~210~~	~~U~~
12674-11-2	Aroclor-1016	41	U
11104-28-2	Aroclor-1221	84	U
11141-16-5	Aroclor-1232	41	U
53469-21-9	Aroclor-1242	41	U
12672-29-6	Aroclor-1248	41	U
11097-69-1	Aroclor-1254	41	U
11096-82-5	Aroclor-1260	41	U

NR 12/15/94

000043

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SB5601

Lab Name: NYTEST ENV INC Contract: 9421375

Lab Code: NYTEST Case No.: 22471 SAS No.: _____ SDG No.: SKIN5

Matrix: (soil/water) SOIL Lab Sample ID: 2247101

Sample wt/vol: 30.0 (g/mL) G Lab File ID: _____

% Moisture: 4 decanted: (Y/N) N Date Received: 11/05/94

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 11/07/94

Concentrated Extract Volume: 5000 (uL) Date Analyzed: 12/04/94

Injection Volume: 1.00 (uL) Dilution Factor: 1.00

GPC Cleanup: (Y/N) Y pH: 7.1 Sulfur Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
~~8001-35-2~~	~~Toxaphene~~	~~100~~	~~U~~
12674-11-2	Aroclor-1016	34	U
11104-28-2	Aroclor-1221	70	U
11141-16-5	Aroclor-1232	34	U
53469-21-9	Aroclor-1242	34	U
12672-29-6	Aroclor-1248	34	U
11097-69-1	Aroclor-1254	34	U
11096-82-5	Aroclor-1260	34	U

NA 04/12/94

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SB5602

Lab Name: NYTEST ENV INC Contract: 9421375

Lab Code: NYTEST Case No.: 22471 SAS No.: _____ SDG No.: SKIN5

Matrix: (soil/water) SOIL Lab Sample ID: 2247102

Sample wt/vol: 30.0 (g/mL) G Lab File ID: _____

% Moisture: 5 decanted: (Y/N) N Date Received: 11/05/94

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 11/07/94

Concentrated Extract Volume: 5000 (uL) Date Analyzed: 12/05/94

Injection Volume: 1.00 (uL) Dilution Factor: 1.00

GPC Cleanup: (Y/N) Y pH: 6.9 Sulfur Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
~~8001-35-2~~	~~Toxaphene~~	~~180~~	~~U~~
12674-11-2	Aroclor-1016	35	U
11104-28-2	Aroclor-1221	71	U
11141-16-5	Aroclor-1232	35	U
53469-21-9	Aroclor-1242	35	U
12672-29-6	Aroclor-1248	35	U
11097-69-1	Aroclor-1254	35	U
11096-82-5	Aroclor-1260	35	U

NA 01/11/95

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SB5603

Lab Name: NYTEST ENV INC Contract: 9421375

Lab Code: NYTEST Case No.: 22471 SAS No.: _____ SDG No.: SKIN5

Matrix: (soil/water) SOIL Lab Sample ID: 2247103

Sample wt/vol: 30.0 (g/mL) G Lab File ID: _____

% Moisture: 6 decanted: (Y/N) N Date Received: 11/05/94

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 11/07/94

Concentrated Extract Volume: 5000 (uL) Date Analyzed: 12/05/94

Injection Volume: 1.00 (uL) Dilution Factor: 1.00

GPC Cleanup: (Y/N) Y pH: 7.3 Sulfur Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
~~8001-35-2~~	~~Toxaphene~~	~~100~~	~~U~~
12674-11-2	Aroclor-1016	35	U
11104-28-2	Aroclor-1221	71	U
11141-16-5	Aroclor-1232	35	U
53469-21-9	Aroclor-1242	35	U
12672-29-6	Aroclor-1248	35	U
11097-69-1	Aroclor-1254	35	U
11096-82-5	Aroclor-1260	35	U

WA 04/19/94

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SB5701

Lab Name: NYTEST ENV INC Contract: 9421375

Lab Code: NYTEST Case No.: 22288 SAS No.: _____ SDG No.: SKIN2

Matrix: (soil/water) SOIL Lab Sample ID: 2228820

Sample wt/vol: 30.0 (g/mL) G Lab File ID: _____

% Moisture: 5 decanted: (Y/N) N Date Received: 10/13/94

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 10/18/94

Concentrated Extract Volume: 5000 (uL) Date Analyzed: 11/20/94

Injection Volume: 1.00 (uL) Dilution Factor: 1.00

GPC Cleanup: (Y/N) Y pH: 6.0 Sulfur Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
~~8001-35-2~~	~~Toxaphene~~	~~100~~	~~U~~
12674-11-2	Aroclor-1016	35	U
11104-28-2	Aroclor-1221	71	U
11141-16-5	Aroclor-1232	35	U
53469-21-9	Aroclor-1242	35	U
12672-29-6	Aroclor-1248	35	U
11097-69-1	Aroclor-1254	35	U
11096-82-5	Aroclor-1260	35	U

NT QY 12/8/94

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PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SB5702

Lab Name: NYTEST ENV INC Contract: 9421375

Lab Code: NYTEST Case No.: 22288 SAS No.: _____ SDG No.: SKIN2

Matrix: (soil/water) SOIL Lab Sample ID: 2228822

Sample wt/vol: 30.0 (g/mL) G Lab File ID: _____

% Moisture: 5 decanted: (Y/N) N Date Received: 10/13/94

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 10/18/94

Concentrated Extract Volume: 5000 (uL) Date Analyzed: 11/20/94

Injection Volume: 1.00 (uL) Dilution Factor: 1.00

GPC Cleanup: (Y/N) Y pH: 6.0 Sulfur Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q	
~~8001-35-2~~	~~Toxaphene~~	~~100~~	~~U~~	NA QX 12/6/94
12674-11-2	Aroclor-1016	35	U	
11104-28-2	Aroclor-1221	71	U	
11141-16-5	Aroclor-1232	35	U	
53469-21-9	Aroclor-1242	35	U	
12672-29-6	Aroclor-1248	35	U	
11097-69-1	Aroclor-1254	35	U	
11096-82-5	Aroclor-1260	35	U	

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1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SB5703

Lab Name: NYTEST ENV INC Contract: 9421375

Lab Code: NYTEST Case No.: 22288 SAS No.: _____ SDG No.: SKIN2

Matrix: (soil/water) SOIL Lab Sample ID: 2228819

Sample wt/vol: 30.0 (g/mL) G Lab File ID: _____

% Moisture: 6 decanted: (Y/N) N Date Received: 10/13/94

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 10/18/94

Concentrated Extract Volume. 5000 (uL) Date Analyzed: 11/20/94

Injection Volume: 1.00 (uL) Dilution Factor: 1.00

GPC Cleanup: (Y/N) Y pH: 6.0 Sulfur Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q	
~~8001-35-2~~	~~Toxaphene~~	~~180~~	~~U~~	WL 01/18/94
12674-11-2	Aroclor-1016	35	U	
11104-28-2	Aroclor-1221	71	U	
11141-16-5	Aroclor-1232	35	U	
53469-21-9	Aroclor-1242	35	U	
12672-29-6	Aroclor-1248	35	U	
11097-69-1	Aroclor-1254	35	U	
11096-82-5	Aroclor-1260	35	U	

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1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SB5801

Lab Name: NYTEST ENV INC Contract: 9421375

Lab Code: NYTEST Case No.: 22288 SAS No.: ______ SDG No.: SKIN2

Matrix: (soil/water) SOIL Lab Sample ID: 2228814

Sample wt/vol: 30.0 (g/mL) G Lab File ID: ______

% Moisture: 5 decanted: (Y/N) N Date Received: 10/13/94

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 10/18/94

Concentrated Extract Volume: 5000 (uL) Date Analyzed: 11/20/94

Injection Volume: 1.00 (uL) Dilution Factor: 1.00

GPC Cleanup: (Y/N) Y pH: 6.0 Sulfur Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
~~8001-35-2~~	~~Toxaphene~~	~~180~~	~~U~~ NA [illegible]
12674-11-2	Aroclor-1016	35	U
11104-28-2	Aroclor-1221	71	U
11141-16-5	Aroclor-1232	35	U
53469-21-9	Aroclor-1242	35	U
12672-29-6	Aroclor-1248	35	U
11097-69-1	Aroclor-1254	35	U
11096-82-5	Aroclor-1260	35	U

000047

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SB5802

Lab Name: NYTEST ENV INC Contract: 9421375

Lab Code: NYTEST Case No.: 22288 SAS No.: _____ SDG No.: SKIN2

Matrix: (soil/water) SOIL Lab Sample ID: 2228817

Sample wt/vol: 30.0 (g/mL) G Lab File ID: _____

% Moisture: 6 decanted: (Y/N) N Date Received: 10/13/94

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 10/18/94

Concentrated Extract Volume: 5000 (uL) Date Analyzed: 11/20/94

Injection Volume: 1.00 (uL) Dilution Factor: 1.00

GPC Cleanup: (Y/N) Y pH: 6.2 Sulfur Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q	
~~8001-35-2~~	~~Toxaphene~~	~~100~~	~~U~~	NA 04/27/94
12674-11-2	Aroclor-1016	35	U	
11104-28-2	Aroclor-1221	71	U	
11141-16-5	Aroclor-1232	35	U	
53469-21-9	Aroclor-1242	35	U	
12672-29-6	Aroclor-1248	35	U	
11097-69-1	Aroclor-1254	35	U	
11096-82-5	Aroclor-1260	35	U	

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SB5803

Lab Name: NYTEST ENV INC Contract: 9421375

Lab Code: NYTEST Case No.: 22288 SAS No.: _____ SDG No.: SKIN2

Matrix: (soil/water) SOIL Lab Sample ID: 2228813

Sample wt/vol: 30.0 (g/mL) G Lab File ID: _____

% Moisture: 8 decanted: (Y/N) N Date Received: 10/13/94

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 10/18/94

Concentrated Extract Volume: 5000 (uL) Date Analyzed: 11/20/94

Injection Volume: 1.00 (uL) Dilution Factor: 1.00

GPC Cleanup: (Y/N) Y pH: 5.9 Sulfur Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q	
~~8001-35-2~~	~~Toxaphene~~	~~100~~	~~U~~	NA 12/14/94
12674-11-2	Aroclor-1016	36	U	
11104-28-2	Aroclor-1221	73	U	
11141-16-5	Aroclor-1232	36	U	
53469-21-9	Aroclor-1242	36	U	
12672-29-6	Aroclor-1248	36	U	
11097-69-1	Aroclor-1254	36	U	
11096-82-5	Aroclor-1260	36	U	

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SB5901

Lab Name: NYTEST ENV INC Contract: 9421375

Lab Code: NYTEST Case No.: 22288 SAS No.: _____ SDG No.: SKIN2

Matrix: (soil/water) SOIL Lab Sample ID: 2228808

Sample wt/vol: 30.0 (g/mL) G Lab File ID: _____

% Moisture: 3 decanted: (Y/N) N Date Received: 10/13/94

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 10/18/94

Concentrated Extract Volume: 5000 (uL) Date Analyzed: 11/19/94

Injection Volume: 1.00 (uL) Dilution Factor: 1.00

GPC Cleanup: (Y/N) Y pH: 6.0 Sulfur Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
~~8001-35-2~~	~~Toxaphene~~	~~180~~	~~U~~
12674-11-2	Aroclor-1016	34	U
11104-28-2	Aroclor-1221	69	U
11141-16-5	Aroclor-1232	34	U
53469-21-9	Aroclor-1242	34	U
12672-29-6	Aroclor-1248	34	U
11097-69-1	Aroclor-1254	34	U
11096-82-5	Aroclor-1260	34	U

NH 11/18/94

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SB8001

Lab Name: NYTEST ENV INC Contract: 9421375

Lab Code: NYTEST Case No.: 22288 SAS No.: _____ SDG No.: SKIN2

Matrix: (soil/water) SOIL Lab Sample ID: 2228816

Sample wt/vol: 30.0 (g/mL) G Lab File ID: _____

% Moisture: 14 decanted: (Y/N) N Date Received: 10/13/94

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 10/18/94

Concentrated Extract Volume: 5000 (uL) Date Analyzed: 11/20/94

Injection Volume: 1.00 (uL) Dilution Factor: 1.00

GPC Cleanup: (Y/N) Y pH: 5.8 Sulfur Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
~~8001-35-2~~	~~Toxaphene~~	~~200~~	~~U~~
12674-11-2	Aroclor-1016	38	U
11104-28-2	Aroclor-1221	78	U
11141-16-5	Aroclor-1232	38	U
53469-21-9	Aroclor-1242	38	U
12672-29-6	Aroclor-1248	38	U
11097-69-1	Aroclor-1254	38	U
11096-82-5	Aroclor-1260	38	U

NA 4/21/95/G1

1D

EPA SAMPLE NO.

PESTICIDE ORGANICS ANALYSIS DATA SHEET

SB8002

Lab Name: NYTEST ENV INC Contract: 9421375

Lab Code: NYTEST Case No.: 22288 SAS No.: _____ SDG No.: SKIN2

Matrix: (soil/water) SOIL Lab Sample ID: 2228821

Sample wt/vol: 30.0 (g/mL) G Lab File ID: _____

% Moisture: 8 decanted: (Y/N) N Date Received: 10/13/94

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 10/18/94

Concentrated Extract Volume: 5000 (uL) Date Analyzed: 11/20/94

Injection Volume: 1.00 (uL) Dilution Factor: 1.00

GPC Cleanup: (Y/N) Y pH: 4.9 Sulfur Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
~~8001-35-2~~	~~Toxaphene~~	~~100~~	~~U~~
12674-11-2	Aroclor-1016	36	U
11104-28-2	Aroclor-1221	73	U
11141-16-5	Aroclor-1232	36	U
53469-21-9	Aroclor-1242	36	U
12672-29-6	Aroclor-1248	36	U
11097-69-1	Aroclor-1254	36	U
11096-82-5	Aroclor-1260	36	U

VA 95-1745194

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SB8003

Lab Name: NYTEST ENV INC Contract: 9421375

Lab Code: NYTEST Case No.: 22288 SAS No.: _____ SDG No.: SKIN2

Matrix: (soil/water) SOIL Lab Sample ID: 2228818

Sample wt/vol: 30.0 (g/mL) G Lab File ID: _____

% Moisture: 8 decanted: (Y/N) N Date Received: 10/13/94

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 10/18/94

Concentrated Extract Volume: 5000 (uL) Date Analyzed: 11/20/94

Injection Volume: 1.00 (uL) Dilution Factor: 1.00

GPC Cleanup: (Y/N) Y pH: 5.6 Sulfur Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q	
~~8001-35-2~~	~~Toxaphene~~	~~180~~	~~U~~	NH 12/19/94
12674-11-2	Aroclor-1016	36	U	
11104-28-2	Aroclor-1221	73	U	
11141-16-5	Aroclor-1232	36	U	
53469-21-9	Aroclor-1242	36	U	
12672-29-6	Aroclor-1248	36	U	
11097-69-1	Aroclor-1254	36	U	
11096-82-5	Aroclor-1260	36	U	

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SB8101

Lab Name: NYTEST ENV INC Contract: 9421375

Lab Code: NYTEST Case No.: 22288 SAS No.: _____ SDG No.: SKIN2

Matrix: (soil/water) SOIL Lab Sample ID: 2228810

Sample wt/vol: 30.0 (g/mL) G Lab File ID: _____

% Moisture: 10 decanted: (Y/N) N Date Received: 10/13/94

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 10/18/94

Concentrated Extract Volume: 5000 (uL) Date Analyzed: 11/19/94

Injection Volume: 1.00 (uL) Dilution Factor: 1.00

GPC Cleanup: (Y/N) Y pH: 5.0 Sulfur Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
~~8001-35-2~~	~~Toxaphene~~	~~190~~	~~U~~
12674-11-2	Aroclor-1016	37	U
11104-28-2	Aroclor-1221	74	U
11141-16-5	Aroclor-1232	37	U
53469-21-9	Aroclor-1242	37	U
12672-29-6	Aroclor-1248	37	U
11097-69-1	Aroclor-1254	37	U
11096-82-5	Aroclor-1260	37	U

Not detected

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SB8102

Lab Name: NYTEST ENV INC Contract: 9421375

Lab Code: NYTEST Case No.: 22288 SAS No.: _____ SDG No.: SKIN2

Matrix: (soil/water) SOIL Lab Sample ID: 2228805

Sample wt/vol: 30.0 (g/mL) G Lab File ID: _____

% Moisture: 6 decanted: (Y/N) N Date Received: 10/13/94

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 10/18/94

Concentrated Extract Volume: 5000 (uL) Date Analyzed: 11/20/94

Injection Volume: 1.00 (uL) Dilution Factor: 1.00

GPC Cleanup: (Y/N) Y pH: 5.0 Sulfur Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q	
~~8001-35-2~~	~~Toxaphene~~	~~180~~	~~U~~	WA 01/24/95
12674-11-2	Aroclor-1016	35	U	
11104-28-2	Aroclor-1221	71	U	
11141-16-5	Aroclor-1232	35	U	
53469-21-9	Aroclor-1242	35	U	
12672-29-6	Aroclor-1248	35	U	
11097-69-1	Aroclor-1254	35	U	
11096-82-5	Aroclor-1260	35	U	

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SB8103

Lab Name: NYTEST ENV INC Contract: 9421375

Lab Code: NYTEST Case No.: 22288 SAS No.: _____ SDG No.: SKIN2

Matrix: (soil/water) SOIL Lab Sample ID: 2228809

Sample wt/vol: 30.0 (g/mL) G Lab File ID: _____

% Moisture: 12 decanted: (Y/N) N Date Received: 10/13/94

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 10/18/94

Concentrated Extract Volume: 5000 (uL) Date Analyzed: 11/20/94

Injection Volume: 1.00 (uL) Dilution Factor: 1.00

GPC Cleanup: (Y/N) Y pH: 5.8 Sulfur Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
~~8001-35-2~~	~~Toxaphene~~	~~190~~	~~U~~
12674-11-2	Aroclor-1016	37	U
11104-28-2	Aroclor-1221	76	U
11141-16-5	Aroclor-1232	37	U
53469-21-9	Aroclor-1242	37	U
12672-29-6	Aroclor-1248	37	U
11097-69-1	Aroclor-1254	37	U
11096-82-5	Aroclor-1260	37	U

NA 12/19/94

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SB8201

Lab Name: NYTEST ENV INC Contract: 9421375

Lab Code: NYTEST Case No.: 22288 SAS No.: _____ SDG No.: SKIN2

Matrix: (soil/water) SOIL Lab Sample ID: 2228812

Sample wt/vol: 30.0 (g/mL) G Lab File ID: _____

% Moisture: 12 decanted: (Y/N) N Date Received: 10/13/94

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 10/18/94

Concentrated Extract Volume: 5000 (uL) Date Analyzed: 11/20/94

Injection Volume: 1.00 (uL) Dilution Factor: 1.00

GPC Cleanup: (Y/N) Y pH: 5.0 Sulfur Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q	
~~8001-35-2~~	~~Toxaphene~~	~~190~~	~~U~~	WH 01/25/95
12674-11-2	Aroclor-1016	37	U	
11104-28-2	Aroclor-1221	76	U	
11141-16-5	Aroclor-1232	37	U	
53469-21-9	Aroclor-1242	37	U	
12672-29-6	Aroclor-1248	37	U	
11097-69-1	Aroclor-1254	37	U	
11096-82-5	Aroclor-1260	37	U	

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SB8202

Lab Name: NYTEST ENV INC Contract: 9421375

Lab Code: NYTEST Case No.: 22288 SAS No.: _____ SDG No.: SKIN2

Matrix: (soil/water) SOIL Lab Sample ID: 2228815

Sample wt/vol: 30.0 (g/mL) G Lab File ID: _____

% Moisture: 9 decanted: (Y/N) N Date Received: 10/13/94

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 10/18/94

Concentrated Extract Volume: 5000 (uL) Date Analyzed: 11/21/94

Injection Volume: 1.00 (uL) Dilution Factor: 1.00

GPC Cleanup: (Y/N) Y pH: 4.9 Sulfur Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q	
~~8001-35-2~~	~~Toxaphene~~	~~190~~	~~U~~	NL QM 11/28/94
12674-11-2	Aroclor-1016	36	U	
11104-28-2	Aroclor-1221	74	U	
11141-16-5	Aroclor-1232	36	U	
53469-21-9	Aroclor-1242	36	U	
12672-29-6	Aroclor-1248	36	U	
11097-69-1	Aroclor-1254	36	U	
11096-82-5	Aroclor-1260	36	U	

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SB8203

Lab Name: NYTEST ENV INC Contract: 9421375

Lab Code: NYTEST Case No.: 22288 SAS No.: _____ SDG No.: SKIN2

Matrix: (soil/water) SOIL Lab Sample ID: 2228804

Sample wt/vol: 30.0 (g/mL) G Lab File ID: _____

% Moisture: 8 decanted: (Y/N) N Date Received: 10/13/94

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 10/18/94

Concentrated Extract Volume: 5000 (uL) Date Analyzed: 11/20/94

Injection Volume: 1.00 (uL) Dilution Factor: 1.00

GPC Cleanup: (Y/N) Y pH: 6.0 Sulfur Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q	
~~8001-35-2~~	~~Toxaphene~~	~~180~~	~~U~~	WF 12/9/94
12674-11-2	Aroclor-1016	36	U	
11104-28-2	Aroclor-1221	73	U	
11141-16-5	Aroclor-1232	36	U	
53469-21-9	Aroclor-1242	36	U	
12672-29-6	Aroclor-1248	36	U	
11097-69-1	Aroclor-1254	36	U	
11096-82-5	Aroclor-1260	36	U	

1

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

SB5001

Lab Name: YTEST_ENV_INC Contract: 9421375

Lab Code: NYTEST Case No.: 22288 SAS No.: _____ SDG No.: SKIN2

Matrix (soil/water): SOIL Lab Sample ID: 228811

Level (low/med): LOW Date Received: 10/13/94

% Solids: 88.7

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum				NR
7440-36-0	Antimony				NR
7440-38-2	Arsenic				NR
7440-39-3	Barium				NR
7440-41-7	Beryllium				NR
7440-43-9	Cadmium				NR
7440-70-2	Calcium				NR
7440-47-3	Chromium				NR
7440-48-4	Cobalt				NR
7440-50-8	Copper				NR
7439-89-6	Iron				NR
7439-92-1	Lead	25.7			F
7439-95-4	Magnesium				NR
7439-96-5	Manganese				NR
7439-97-6	Mercury				NR
7440-02-0	Nickel				NR
7440-09-7	Potassium				NR
7782-49-2	Selenium				NR
7440-22-4	Silver				NR
7440-23-5	Sodium				NR
7440-28-0	Thallium				NR
7440-62-2	Vanadium				NR
7440-66-6	Zinc				NR
5955-70-0	Cyanide				NR

Color Before: BROWN Clarity Before: _____ Texture: MEDIUM

Color After: YELLOW Clarity After: CLEAR Artifacts: _____

Comments:

1

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

SB5002

Lab Name: YTEST_ENV_INC Contract: 9421375

Lab Code: NYTEST Case No.: 22288 SAS No.: _____ SDG No.: SKIN2

Matrix (soil/water): SOIL Lab Sample ID: 228807

Level (low/med): LOW Date Received: 10/13/94

% Solids: 89.8

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum				NR
7440-36-0	Antimony				NR
7440-38-2	Arsenic				NR
7440-39-3	Barium				NR
7440-41-7	Beryllium				NR
7440-43-9	Cadmium				NR
7440-70-2	Calcium				NR
7440-47-3	Chromium				NR
7440-48-4	Cobalt				NR
7440-50-8	Copper				NR
7439-89-6	Iron				NR
7439-92-1	Lead	31.9			P
7439-95-4	Magnesium				NR
7439-96-5	Manganese				NR
7439-97-6	Mercury				NR
7440-02-0	Nickel				NR
7440-09-7	Potassium				NR
7782-49-2	Selenium				NR
7440-22-4	Silver				NR
7440-23-5	Sodium				NR
7440-28-0	Thallium				NR
7440-62-2	Vanadium				NR
7440-66-6	Zinc				NR
5955-70-0	Cyanide				NR

Color Before: BROWN Clarity Before: _____ Texture: MEDIUM

Color After: YELLOW Clarity After: CLEAR Artifacts: _____

Comments:

1

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

SB5003

Lab Name: YTEST_ENV_INC Contract: 9421375

Lab Code: NYTEST Case No.: 22288 SAS No.: _____ SDG No.: SKIN2

Matrix (soil/water): SOIL Lab Sample ID: 228801

Level (low/med): LOW Date Received: 10/13/94

% Solids: 85.5

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum				NR
7440-36-0	Antimony				NR
7440-38-2	Arsenic				NR
7440-39-3	Barium				NR
7440-41-7	Beryllium				NR
7440-43-9	Cadmium				NR
7440-70-2	Calcium				NR
7440-47-3	Chromium				NR
7440-48-4	Cobalt				NR
7440-50-8	Copper				NR
7439-89-6	Iron				NR
7439-92-1	Lead	55.2			P
7439-95-4	Magnesium				NR
7439-96-5	Manganese				NR
7439-97-6	Mercury				NR
7440-02-0	Nickel				NR
7440-09-7	Potassium				NR
7782-49-2	Selenium				NR
7440-22-4	Silver				NR
7440-23-5	Sodium				NR
7440-28-0	Thallium				NR
7440-62-2	Vanadium				NR
7440-66-6	Zinc				NR
5955-70-0	Cyanide				NR

Color Before: BROWN Clarity Before: _____ Texture: MEDIUM

Color After: YELLOW Clarity After: CLEAR Artifacts: _____

Comments:

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INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

SB5101

Lab Name: YTEST_ENV_INC Contract: 9421375

Lab Code: NYTEST Case No.: 22288 SAS No.: _____ SDG No.: SKIN2

Matrix (soil/water): SOIL Lab Sample ID: 228803

Level (low/med): LOW Date Received: 10/13/94

% Solids: 87.8

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum				NR
7440-36-0	Antimony				NR
7440-38-2	Arsenic				NR
7440-39-3	Barium				NR
7440-41-7	Beryllium				NR
7440-43-9	Cadmium				NR
7440-70-2	Calcium				NR
7440-47-3	Chromium				NR
7440-48-4	Cobalt				NR
7440-50-8	Copper				NR
7439-89-6	Iron				NR
7439-92-1	Lead	16.1			F
7439-95-4	Magnesium				NR
7439-96-5	Manganese				NR
7439-97-6	Mercury				NR
7440-02-0	Nickel				NR
7440-09-7	Potassium				NR
7782-49-2	Selenium				NR
7440-22-4	Silver				NR
7440-23-5	Sodium				NR
7440-28-0	Thallium				NR
7440-62-2	Vanadium				NR
7440-66-6	Zinc				NR
5955-70-0	Cyanide				NR

Color Before: BROWN Clarity Before: _____ Texture: MEDIUM

Color After: YELLOW Clarity After: CLEAR Artifacts: _____

Comments:

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INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

SB5102

Lab Name: YTEST_ENV_INC Contract: 9421375

Lab Code: NYTEST Case No.: 22288 SAS No.: SDG No.: SKIN2

Matrix (soil/water): SOIL Lab Sample ID: 228802

Level (low/med): LOW Date Received: 10/13/94

% Solids: 89.7

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum				NR
7440-36-0	Antimony				NR
7440-38-2	Arsenic				NR
7440-39-3	Barium				NR
7440-41-7	Beryllium				NR
7440-43-9	Cadmium				NR
7440-70-2	Calcium				NR
7440-47-3	Chromium				NR
7440-48-4	Cobalt				NR
7440-50-8	Copper				NR
7439-89-6	Iron				NR
7439-92-1	Lead	30.5			P
7439-95-4	Magnesium				NR
7439-96-5	Manganese				NR
7439-97-6	Mercury				NR
7440-02-0	Nickel				NR
7440-09-7	Potassium				NR
7782-49-2	Selenium				NR
7440-22-4	Silver				NR
7440-23-5	Sodium				NR
7440-28-0	Thallium				NR
7440-62-2	Vanadium				NR
7440-66-6	Zinc				NR
5955-70-0	Cyanide				NR

Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: YELLOW Clarity After: CLEAR Artifacts:

Comments:

U.S. EPA - CLP

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INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

SB5103

Lab Name: YTEST_ENV_INC Contract: 9421375

Lab Code: NYTEST Case No.: 22288 SAS No.: SDG No.: SKIN2

Matrix (soil/water): SOIL Lab Sample ID: 228806

Level (low/med): LOW Date Received: 10/13/94

% Solids: 81.6

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum				NR
7440-36-0	Antimony				NR
7440-38-2	Arsenic				NR
7440-39-3	Barium				NR
7440-41-7	Beryllium				NR
7440-43-9	Cadmium				NR
7440-70-2	Calcium				NR
7440-47-3	Chromium				NR
7440-48-4	Cobalt				NR
7440-50-8	Copper				NR
7439-89-6	Iron				NR
7439-92-1	Lead	18.8			F
7439-95-4	Magnesium				NR
7439-96-5	Manganese				NR
7439-97-6	Mercury				NR
7440-02-0	Nickel				NR
7440-09-7	Potassium				NR
7782-49-2	Selenium				NR
7440-22-4	Silver				NR
7440-23-5	Sodium				NR
7440-28-0	Thallium				NR
7440-62-2	Vanadium				NR
7440-66-6	Zinc				NR
5955-70-0	Cyanide				NR

Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: YELLOW Clarity After: CLEAR Artifacts:

Comments:

1

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

SB5201

Lab Name: NYTEST_ENV_INC Contract: 9421375

Lab Code: NYTEST Case No.: 22303 SAS No.: _____ SDG No.: SKIN3

Matrix (soil/water): SOIL Lab Sample ID: 230309

Level (low/med): LOW Date Received: 10/15/94

% Solids: 88.7

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum				NR
7440-36-0	Antimony				NR
7440-38-2	Arsenic				NR
7440-39-3	Barium				NR
7440-41-7	Beryllium				NR
7440-43-9	Cadmium				NR
7440-70-2	Calcium				NR
7440-47-3	Chromium				NR
7440-48-4	Cobalt				NR
7440-50-8	Copper				NR
7439-89-6	Iron				NR
7439-92-1	Lead	22.7			F
7439-95-4	Magnesium				NR
7439-96-5	Manganese				NR
7439-97-6	Mercury				NR
7440-02-0	Nickel				NR
7440-09-7	Potassium				NR
7782-49-2	Selenium				NR
7440-22-4	Silver				NR
7440-23-5	Sodium				NR
7440-28-0	Thallium				NR
7440-62-2	Vanadium				NR
7440-66-6	Zinc				NR
5955-70-0	Cyanide				NR

Color Before: BROWN Clarity Before: _____ Texture: MEDIUM

Color After: YELLOW Clarity After: CLEAR Artifacts: _____

Comments:

U.S. EPA - CLP

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INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

SB5202

Lab Name: NYTEST_ENV_INC Contract: 9421375

Lab Code: NYTEST Case No.: 22303 SAS No.: SDG No.: SKIN3

Matrix (soil/water): SOIL Lab Sample ID: 230308

Level (low/med): LOW Date Received: 10/15/94

% Solids: 86.7

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum				NR
7440-36-0	Antimony				NR
7440-38-2	Arsenic				NR
7440-39-3	Barium				NR
7440-41-7	Beryllium				NR
7440-43-9	Cadmium				NR
7440-70-2	Calcium				NR
7440-47-3	Chromium				NR
7440-48-4	Cobalt				NR
7440-50-8	Copper				NR
7439-89-6	Iron				NR
7439-92-1	Lead	37.0			P
7439-95-4	Magnesium				NR
7439-96-5	Manganese				NR
7439-97-6	Mercury				NR
7440-02-0	Nickel				NR
7440-09-7	Potassium				NR
7782-49-2	Selenium				NR
7440-22-4	Silver				NR
7440-23-5	Sodium				NR
7440-28-0	Thallium				NR
7440-62-2	Vanadium				NR
7440-66-6	Zinc				NR
5955-70-0	Cyanide				NR

Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: YELLOW Clarity After: CLEAR Artifacts:

Comments:

U.S. EPA - CLP

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INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

SB5203

Lab Name: NYTEST_ENV_INC Contract: 9421375

Lab Code: NYTEST Case No.: 22303 SAS No.: SDG No.: SKIN3

Matrix (soil/water): SOIL Lab Sample ID: 230306

Level (low/med): LOW Date Received: 10/15/94

% Solids: 84.2

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum				NR
7440-36-0	Antimony				NR
7440-38-2	Arsenic				NR
7440-39-3	Barium				NR
7440-41-7	Beryllium				NR
7440-43-9	Cadmium				NR
7440-70-2	Calcium				NR
7440-47-3	Chromium				NR
7440-48-4	Cobalt				NR
7440-50-8	Copper				NR
7439-89-6	Iron				NR
7439-92-1	Lead	30.6			P
7439-95-4	Magnesium				NR
7439-96-5	Manganese				NR
7439-97-6	Mercury				NR
7440-02-0	Nickel				NR
7440-09-7	Potassium				NR
7782-49-2	Selenium				NR
7440-22-4	Silver				NR
7440-23-5	Sodium				NR
7440-28-0	Thallium				NR
7440-62-2	Vanadium				NR
7440-66-6	Zinc				NR
5955-70-0	Cyanide				NR

Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: YELLOW Clarity After: CLEAR Artifacts:

Comments:

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INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

SB5301

Lab Name: NYTEST_ENV_INC Contract: 9421375

Lab Code: NYTEST Case No.: 22303 SAS No.: SDG No.: SKIN3

Matrix (soil/water): SOIL Lab Sample ID: 230301

Level (low/med): LOW Date Received: 10/15/94

% Solids: 94.2

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum				NR
7440-36-0	Antimony				NR
7440-38-2	Arsenic				NR
7440-39-3	Barium				NR
7440-41-7	Beryllium				NR
7440-43-9	Cadmium				NR
7440-70-2	Calcium				NR
7440-47-3	Chromium				NR
7440-48-4	Cobalt				NR
7440-50-8	Copper				NR
7439-89-6	Iron				NR
7439-92-1	Lead	13.3			F
7439-95-4	Magnesium				NR
7439-96-5	Manganese				NR
7439-97-6	Mercury				NR
7440-02-0	Nickel				NR
7440-09-7	Potassium				NR
7782-49-2	Selenium				NR
7440-22-4	Silver				NR
7440-23-5	Sodium				NR
7440-28-0	Thallium				NR
7440-62-2	Vanadium				NR
7440-66-6	Zinc				NR
5955-70-0	Cyanide				NR

Color Before: BLACK Clarity Before: Texture: MEDIUM

Color After: YELLOW Clarity After: CLEAR Artifacts:

Comments:

1

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

SB5302

Lab Name: NYTEST_ENV_INC Contract: 9421375

Lab Code: NYTEST Case No.: 22303 SAS No.: _____ SDG No.: SKIN3

Matrix (soil/water): SOIL Lab Sample ID: 230302

Level (low/med): LOW Date Received: 10/15/94

% Solids: 84.2

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum				NR
7440-36-0	Antimony				NR
7440-38-2	Arsenic				NR
7440-39-3	Barium				NR
7440-41-7	Beryllium				NR
7440-43-9	Cadmium				NR
7440-70-2	Calcium				NR
7440-47-3	Chromium				NR
7440-48-4	Cobalt				NR
7440-50-8	Copper				NR
7439-89-6	Iron				NR
7439-92-1	Lead	481			P
7439-95-4	Magnesium				NR
7439-96-5	Manganese				NR
7439-97-6	Mercury				NR
7440-02-0	Nickel				NR
7440-09-7	Potassium				NR
7782-49-2	Selenium				NR
7440-22-4	Silver				NR
7440-23-5	Sodium				NR
7440-28-0	Thallium				NR
7440-62-2	Vanadium				NR
7440-66-6	Zinc				NR
5955-70-0	Cyanide				NR

Color Before: BROWN Clarity Before: _____ Texture: MEDIUM

Color After: YELLOW Clarity After: CLEAR Artifacts: _____

Comments:

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

SB5303

Lab Name: NYTEST_ENV_INC Contract: 9421375

Lab Code: NYTEST Case No.: 22303 SAS No.: _____ SDG No.: SKIN3

Matrix (soil/water): SOIL Lab Sample ID: 230307

Level (low/med): LOW Date Received: 10/15/94

% Solids: 85.2

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum				NR
7440-36-0	Antimony				NR
7440-38-2	Arsenic				NR
7440-39-3	Barium				NR
7440-41-7	Beryllium				NR
7440-43-9	Cadmium				NR
7440-70-2	Calcium				NR
7440-47-3	Chromium				NR
7440-48-4	Cobalt				NR
7440-50-8	Copper				NR
7439-89-6	Iron				NR
7439-92-1	Lead	45.3			P
7439-95-4	Magnesium				NR
7439-96-5	Manganese				NR
7439-97-6	Mercury				NR
7440-02-0	Nickel				NR
7440-09-7	Potassium				NR
7782-49-2	Selenium				NR
7440-22-4	Silver				NR
7440-23-5	Sodium				NR
7440-28-0	Thallium				NR
7440-62-2	Vanadium				NR
7440-66-6	Zinc				NR
5955-70-0	Cyanide				NR

Color Before: BROWN Clarity Before: _____ Texture: MEDIUM

Color After: YELLOW Clarity After: CLEAR Artifacts: _____

Comments:

U.S. EPA - CLP

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INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

SB5401

Lab Name: NYTEST_ENV_INC Contract: 9421375

Lab Code: NYTEST Case No.: 22303 SAS No.: _____ SDG No.: SKIN3

Matrix (soil/water): SOIL Lab Sample ID: 230303

Level (low/med): LOW Date Received: 10/15/94

% Solids: 82.8

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum				NR
7440-36-0	Antimony				NR
7440-38-2	Arsenic				NR
7440-39-3	Barium				NR
7440-41-7	Beryllium				NR
7440-43-9	Cadmium				NR
7440-70-2	Calcium				NR
7440-47-3	Chromium				NR
7440-48-4	Cobalt				NR
7440-50-8	Copper				NR
7439-89-6	Iron				NR
7439-92-1	Lead	24.0			F
7439-95-4	Magnesium				NR
7439-96-5	Manganese				NR
7439-97-6	Mercury				NR
7440-02-0	Nickel				NR
7440-09-7	Potassium				NR
7782-49-2	Selenium				NR
7440-22-4	Silver				NR
7440-23-5	Sodium				NR
7440-28-0	Thallium				NR
7440-62-2	Vanadium				NR
7440-66-6	Zinc				NR
5955-70-0	Cyanide				NR

Color Before: BROWN Clarity Before: _____ Texture: MEDIUM

Color After: YELLOW Clarity After: CLEAR Artifacts: _____

Comments:

U.S. EPA - CLP

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INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

SB5402

Lab Name: NYTEST_ENV_INC Contract: 9421375

Lab Code: NYTEST Case No.: 22303 SAS No.: SDG No.: SKIN3

Matrix (soil/water): SOIL Lab Sample ID: 230312

Level (low/med): LOW Date Received: 10/15/94

% Solids: 80.8

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum				NR
7440-36-0	Antimony				NR
7440-38-2	Arsenic				NR
7440-39-3	Barium				NR
7440-41-7	Beryllium				NR
7440-43-9	Cadmium				NR
7440-70-2	Calcium				NR
7440-47-3	Chromium				NR
7440-48-4	Cobalt				NR
7440-50-8	Copper				NR
7439-89-6	Iron				NR
7439-92-1	Lead	20.1			F
7439-95-4	Magnesium				NR
7439-96-5	Manganese				NR
7439-97-6	Mercury				NR
7440-02-0	Nickel				NR
7440-09-7	Potassium				NR
7782-49-2	Selenium				NR
7440-22-4	Silver				NR
7440-23-5	Sodium				NR
7440-28-0	Thallium				NR
7440-62-2	Vanadium				NR
7440-66-6	Zinc				NR
5955-70-0	Cyanide				NR

Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: YELLOW Clarity After: CLEAR Artifacts:

Comments:

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INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

SB5403

Lab Name: NYTEST_ENV_INC Contract: 9421375

Lab Code: NYTEST Case No.: 22303 SAS No.: SDG No.: SKIN3

Matrix (soil/water): SOIL Lab Sample ID: 230313

Level (low/med): LOW Date Received: 10/15/94

% Solids: 79.9

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum				NR
7440-36-0	Antimony				NR
7440-38-2	Arsenic				NR
7440-39-3	Barium				NR
7440-41-7	Beryllium				NR
7440-43-9	Cadmium				NR
7440-70-2	Calcium				NR
7440-47-3	Chromium				NR
7440-48-4	Cobalt				NR
7440-50-8	Copper				NR
7439-89-6	Iron				NR
7439-92-1	Lead	17.6			F
7439-95-4	Magnesium				NR
7439-96-5	Manganese				NR
7439-97-6	Mercury				NR
7440-02-0	Nickel				NR
7440-09-7	Potassium				NR
7782-49-2	Selenium				NR
7440-22-4	Silver				NR
7440-23-5	Sodium				NR
7440-28-0	Thallium				NR
7440-62-2	Vanadium				NR
7440-66-6	Zinc				NR
5955-70-0	Cyanide				NR

Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: YELLOW Clarity After: CLEAR Artifacts:

Comments:

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INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

SB5501

Lab Name: NYTEST_ENV_INC Contract: 9421375

Lab Code: NYTEST Case No.: 22302 SAS No.: SDG No.: ALB12

Matrix (soil/water): SOIL Lab Sample ID: 230201

Level (low/med): LOW Date Received: 10/15/94

% Solids: 83.6

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum				NR
7440-36-0	Antimony				NR
7440-38-2	Arsenic				NR
7440-39-3	Barium				NR
7440-41-7	Beryllium				NR
7440-43-9	Cadmium				NR
7440-70-2	Calcium				NR
7440-47-3	Chromium				NR
7440-48-4	Cobalt				NR
7440-50-8	Copper				NR
7439-89-6	Iron				NR
7439-92-1	Lead	845		E*	P
7439-95-4	Magnesium				NR
7439-96-5	Manganese				NR
7439-97-6	Mercury				NR
7440-02-0	Nickel				NR
7440-09-7	Potassium				NR
7782-49-2	Selenium				NR
7440-22-4	Silver				NR
7440-23-5	Sodium				NR
7440-28-0	Thallium				NR
7440-62-2	Vanadium				NR
7440-66-6	Zinc				NR
5955-70-0	Cyanide				NR

Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: YELLOW Clarity After: CLEAR Artifacts:

Comments:

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INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

SB5502

Lab Name: NYTEST_ENV_INC Contract: 9421375

Lab Code: NYTEST Case No.: 22302 SAS No.: SDG No.: ALB12

Matrix (soil/water): SOIL Lab Sample ID: 230204

Level (low/med): LOW Date Received: 10/15/94

% Solids: 81.3

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum				NR
7440-36-0	Antimony				NR
7440-38-2	Arsenic				NR
7440-39-3	Barium				NR
7440-41-7	Beryllium				NR
7440-43-9	Cadmium				NR
7440-70-2	Calcium				NR
7440-47-3	Chromium				NR
7440-48-4	Cobalt				NR
7440-50-8	Copper				NR
7439-89-6	Iron				NR
7439-92-1	Lead	57.5		E*	P
7439-95-4	Magnesium				NR
7439-96-5	Manganese				NR
7439-97-6	Mercury				NR
7440-02-0	Nickel				NR
7440-09-7	Potassium				NR
7782-49-2	Selenium				NR
7440-22-4	Silver				NR
7440-23-5	Sodium				NR
7440-28-0	Thallium				NR
7440-62-2	Vanadium				NR
7440-66-6	Zinc				NR
5955-70-0	Cyanide				NR

Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: YELLOW Clarity After: CLEAR Artifacts:

Comments:

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INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

SB5503

Lab Name: NYTEST_ENV_INC Contract: 9421375

Lab Code: NYTEST Case No.: 22302 SAS No.: _____ SDG No.: ALB12

Matrix (soil/water): SOIL Lab Sample ID: 230205

Level (low/med): LOW Date Received: 10/15/94

% Solids: 79.9

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum				NR
7440-36-0	Antimony				NR
7440-38-2	Arsenic				NR
7440-39-3	Barium				NR
7440-41-7	Beryllium				NR
7440-43-9	Cadmium				NR
7440-70-2	Calcium				NR
7440-47-3	Chromium				NR
7440-48-4	Cobalt				NR
7440-50-8	Copper				NR
7439-89-6	Iron				NR
7439-92-1	Lead	366		E*	P
7439-95-4	Magnesium				NR
7439-96-5	Manganese				NR
7439-97-6	Mercury				NR
7440-02-0	Nickel				NR
7440-09-7	Potassium				NR
7782-49-2	Selenium				NR
7440-22-4	Silver				NR
7440-23-5	Sodium				NR
7440-28-0	Thallium				NR
7440-62-2	Vanadium				NR
7440-66-6	Zinc				NR
5955-70-0	Cyanide				NR

Color Before: BROWN Clarity Before: _____ Texture: MEDIUM

Color After: YELLOW Clarity After: CLEAR Artifacts: _____

Comments:

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INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

SB5601

Lab Name: NYTEST_ENV_INC Contract: 9421375

Lab Code: NYTEST Case No.: 22471 SAS No.: _____ SDG No.: SKIN5

Matrix (soil/water): SOIL Lab Sample ID: 247101

Level (low/med): LOW Date Received: 11/05/94

% Solids: 95.8

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum				NR
7440-36-0	Antimony				NR
7440-38-2	Arsenic				NR
7440-39-3	Barium				NR
7440-41-7	Beryllium				NR
7440-43-9	Cadmium				NR
7440-70-2	Calcium				NR
7440-47-3	Chromium				NR
7440-48-4	Cobalt				NR
7440-50-8	Copper				NR
7439-89-6	Iron				NR
7439-92-1	Lead	8.0			F
7439-95-4	Magnesium				NR
7439-96-5	Manganese				NR
7439-97-6	Mercury				NR
7440-02-0	Nickel				NR
7440-09-7	Potassium				NR
7782-49-2	Selenium				NR
7440-22-4	Silver				NR
7440-23-5	Sodium				NR
7440-28-0	Thallium				NR
7440-62-2	Vanadium				NR
7440-66-6	Zinc				NR
5955-70-0	Cyanide				NR

Color Before: BROWN Clarity Before: _____ Texture: MEDIUM

Color After: COLORLESS Clarity After: CLEAR Artifacts: _____

Comments:

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INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

SB5602

Lab Name: NYTEST_ENV_INC Contract: 9421375

Lab Code: NYTEST Case No.: 22471 SAS No.: SDG No.: SKIN5

Matrix (soil/water): SOIL Lab Sample ID: 247102

Level (low/med): LOW Date Received: 11/05/94

% Solids: 95.1

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum				NR
7440-36-0	Antimony				NR
7440-38-2	Arsenic				NR
7440-39-3	Barium				NR
7440-41-7	Beryllium				NR
7440-43-9	Cadmium				NR
7440-70-2	Calcium				NR
7440-47-3	Chromium				NR
7440-48-4	Cobalt				NR
7440-50-8	Copper				NR
7439-89-6	Iron				NR
7439-92-1	Lead	7.2			F
7439-95-4	Magnesium				NR
7439-96-5	Manganese				NR
7439-97-6	Mercury				NR
7440-02-0	Nickel				NR
7440-09-7	Potassium				NR
7782-49-2	Selenium				NR
7440-22-4	Silver				NR
7440-23-5	Sodium				NR
7440-28-0	Thallium				NR
7440-62-2	Vanadium				NR
7440-66-6	Zinc				NR
5955-70-0	Cyanide				NR

Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

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INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

SB5603

Lab Name: NYTEST_ENV_INC Contract: 9421375

Lab Code: NYTEST Case No.: 22471 SAS No.: SDG No.: SKIN5

Matrix (soil/water): SOIL Lab Sample ID: 247103

Level (low/med): LOW Date Received: 11/05/94

% Solids: 93.8

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum				NR
7440-36-0	Antimony				NR
7440-38-2	Arsenic				NR
7440-39-3	Barium				NR
7440-41-7	Beryllium				NR
7440-43-9	Cadmium				NR
7440-70-2	Calcium				NR
7440-47-3	Chromium				NR
7440-48-4	Cobalt				NR
7440-50-8	Copper				NR
7439-89-6	Iron				NR
7439-92-1	Lead	5.8			F
7439-95-4	Magnesium				NR
7439-96-5	Manganese				NR
7439-97-6	Mercury				NR
7440-02-0	Nickel				NR
7440-09-7	Potassium				NR
7782-49-2	Selenium				NR
7440-22-4	Silver				NR
7440-23-5	Sodium				NR
7440-28-0	Thallium				NR
7440-62-2	Vanadium				NR
7440-66-6	Zinc				NR
5955-70-0	Cyanide				NR

Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

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INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

SB5701

Lab Name: YTEST_ENV_INC Contract: 9421375

Lab Code: NYTEST Case No.: 22288 SAS No.: _____ SDG No.: SKIN2

Matrix (soil/water): SOIL Lab Sample ID: 228820

Level (low/med): LOW Date Received: 10/13/94

% Solids: 95.4

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum				NR
7440-36-0	Antimony				NR
7440-38-2	Arsenic				NR
7440-39-3	Barium				NR
7440-41-7	Beryllium				NR
7440-43-9	Cadmium				NR
7440-70-2	Calcium				NR
7440-47-3	Chromium				NR
7440-48-4	Cobalt				NR
7440-50-8	Copper				NR
7439-89-6	Iron				NR
7439-92-1	Lead	5.9			F
7439-95-4	Magnesium				NR
7439-96-5	Manganese				NR
7439-97-6	Mercury				NR
7440-02-0	Nickel				NR
7440-09-7	Potassium				NR
7782-49-2	Selenium				NR
7440-22-4	Silver				NR
7440-23-5	Sodium				NR
7440-28-0	Thallium				NR
7440-62-2	Vanadium				NR
7440-66-6	Zinc				NR
5955-70-0	Cyanide				NR

Color Before: BROWN Clarity Before: _____ Texture: MEDIUM

Color After: YELLOW Clarity After: CLEAR Artifacts: _____

Comments:

1

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

SB5702

Lab Name: YTEST_ENV_INC Contract: 9421375

Lab Code: NYTEST Case No.: 22288 SAS No.: _____ SDG No.: SKIN2

Matrix (soil/water): SOIL Lab Sample ID: 228822

Level (low/med): LOW Date Received: 10/13/94

% Solids: 95.0

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum				NR
7440-36-0	Antimony				NR
7440-38-2	Arsenic				NR
7440-39-3	Barium				NR
7440-41-7	Beryllium				NR
7440-43-9	Cadmium				NR
7440-70-2	Calcium				NR
7440-47-3	Chromium				NR
7440-48-4	Cobalt				NR
7440-50-8	Copper				NR
7439-89-6	Iron				NR
7439-92-1	Lead	6.8			F
7439-95-4	Magnesium				NR
7439-96-5	Manganese				NR
7439-97-6	Mercury				NR
7440-02-0	Nickel				NR
7440-09-7	Potassium				NR
7782-49-2	Selenium				NR
7440-22-4	Silver				NR
7440-23-5	Sodium				NR
7440-28-0	Thallium				NR
7440-62-2	Vanadium				NR
7440-66-6	Zinc				NR
5955-70-0	Cyanide				NR

Color Before: BROWN Clarity Before: _____ Texture: MEDIUM

Color After: YELLOW Clarity After: CLEAR Artifacts: _____

Comments:

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INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

SB5703

Lab Name: YTEST_ENV_INC Contract: 9421375

Lab Code: NYTEST Case No.: 22288 SAS No.: _____ SDG No.: SKIN2

Matrix (soil/water): SOIL Lab Sample ID: 228819

Level (low/med): LOW Date Received: 10/13/94

% Solids: 94.2

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum				NR
7440-36-0	Antimony				NR
7440-38-2	Arsenic				NR
7440-39-3	Barium				NR
7440-41-7	Beryllium				NR
7440-43-9	Cadmium				NR
7440-70-2	Calcium				NR
7440-47-3	Chromium				NR
7440-48-4	Cobalt				NR
7440-50-8	Copper				NR
7439-89-6	Iron				NR
7439-92-1	Lead	6.7			F
7439-95-4	Magnesium				NR
7439-96-5	Manganese				NR
7439-97-6	Mercury				NR
7440-02-0	Nickel				NR
7440-09-7	Potassium				NR
7782-49-2	Selenium				NR
7440-22-4	Silver				NR
7440-23-5	Sodium				NR
7440-28-0	Thallium				NR
7440-62-2	Vanadium				NR
7440-66-6	Zinc				NR
5955-70-0	Cyanide				NR

Color Before: BROWN Clarity Before: _____ Texture: MEDIUM

Color After: YELLOW Clarity After: CLEAR Artifacts: _____

Comments:

U.S. EPA - CLP

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INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

SB5801

Lab Name: YTEST_ENV_INC Contract: 9421375

Lab Code: NYTEST Case No.: 22288 SAS No.: SDG No.: SKIN2

Matrix (soil/water): SOIL Lab Sample ID: 228814

Level (low/med): LOW Date Received: 10/13/94

% Solids: 94.8

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum				NR
7440-36-0	Antimony				NR
7440-38-2	Arsenic				NR
7440-39-3	Barium				NR
7440-41-7	Beryllium				NR
7440-43-9	Cadmium				NR
7440-70-2	Calcium				NR
7440-47-3	Chromium				NR
7440-48-4	Cobalt				NR
7440-50-8	Copper				NR
7439-89-6	Iron				NR
7439-92-1	Lead	13.4			F
7439-95-4	Magnesium				NR
7439-96-5	Manganese				NR
7439-97-6	Mercury				NR
7440-02-0	Nickel				NR
7440-09-7	Potassium				NR
7782-49-2	Selenium				NR
7440-22-4	Silver				NR
7440-23-5	Sodium				NR
7440-28-0	Thallium				NR
7440-62-2	Vanadium				NR
7440-66-6	Zinc				NR
5955-70-0	Cyanide				NR

Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: YELLOW Clarity After: CLEAR Artifacts:

Comments:

U.S. EPA - CLP

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INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

SB5802

Lab Name: YTEST_ENV_INC Contract: 9421375

Lab Code: NYTEST Case No.: 22288 SAS No.: _____ SDG No.: SKIN2

Matrix (soil/water): SOIL Lab Sample ID: 228817

Level (low/med): LOW Date Received: 10/13/94

% Solids: 94.5

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum				NR
7440-36-0	Antimony				NR
7440-38-2	Arsenic				NR
7440-39-3	Barium				NR
7440-41-7	Beryllium				NR
7440-43-9	Cadmium				NR
7440-70-2	Calcium				NR
7440-47-3	Chromium				NR
7440-48-4	Cobalt				NR
7440-50-8	Copper				NR
7439-89-6	Iron				NR
7439-92-1	Lead	6.5			F
7439-95-4	Magnesium				NR
7439-96-5	Manganese				NR
7439-97-6	Mercury				NR
7440-02-0	Nickel				NR
7440-09-7	Potassium				NR
7782-49-2	Selenium				NR
7440-22-4	Silver				NR
7440-23-5	Sodium				NR
7440-28-0	Thallium				NR
7440-62-2	Vanadium				NR
7440-66-6	Zinc				NR
5955-70-0	Cyanide				NR

Color Before: BROWN Clarity Before: _____ Texture: MEDIUM

Color After: YELLOW Clarity After: CLEAR Artifacts: _____

Comments:

U.S. EPA - CLP

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INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

SB5803

Lab Name: YTEST_ENV_INC Contract: 9421375

Lab Code: NYTEST Case No.: 22288 SAS No.: _____ SDG No.: SKIN2

Matrix (soil/water): SOIL Lab Sample ID: 228813

Level (low/med): LOW Date Received: 10/13/94

% Solids: 92.0

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum				NR
7440-36-0	Antimony				NR
7440-38-2	Arsenic				NR
7440-39-3	Barium				NR
7440-41-7	Beryllium				NR
7440-43-9	Cadmium				NR
7440-70-2	Calcium				NR
7440-47-3	Chromium				NR
7440-48-4	Cobalt				NR
7440-50-8	Copper				NR
7439-89-6	Iron				NR
7439-92-1	Lead	9.0			F
7439-95-4	Magnesium				NR
7439-96-5	Manganese				NR
7439-97-6	Mercury				NR
7440-02-0	Nickel				NR
7440-09-7	Potassium				NR
7782-49-2	Selenium				NR
7440-22-4	Silver				NR
7440-23-5	Sodium				NR
7440-28-0	Thallium				NR
7440-62-2	Vanadium				NR
7440-66-6	Zinc				NR
5955-70-0	Cyanide				NR

Color Before: BROWN Clarity Before: _____ Texture: MEDIUM

Color After: YELLOW Clarity After: CLEAR Artifacts: _____

Comments:

1

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

SB5909

Lab Name: YTEST_ENV_INC Contract: 9421375

Lab Code: NYTEST Case No.: 22288 SAS No.: _____ SDG No.: SKIN2

Matrix (soil/water): SOIL Lab Sample ID: 228808

Level (low/med): LOW Date Received: 10/13/94

% Solids: 96.7

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum				NR
7440-36-0	Antimony				NR
7440-38-2	Arsenic				NR
7440-39-3	Barium				NR
7440-41-7	Beryllium				NR
7440-43-9	Cadmium				NR
7440-70-2	Calcium				NR
7440-47-3	Chromium				NR
7440-48-4	Cobalt				NR
7440-50-8	Copper				NR
7439-89-6	Iron				NR
7439-92-1	Lead	7.4			F
7439-95-4	Magnesium				NR
7439-96-5	Manganese				NR
7439-97-6	Mercury				NR
7440-02-0	Nickel				NR
7440-09-7	Potassium				NR
7782-49-2	Selenium				NR
7440-22-4	Silver				NR
7440-23-5	Sodium				NR
7440-28-0	Thallium				NR
7440-62-2	Vanadium				NR
7440-66-6	Zinc				NR
5955-70-0	Cyanide				NR

Color Before: BROWN Clarity Before: _____ Texture: MEDIUM

Color After: YELLOW Clarity After: CLEAR Artifacts: _____

Comments:

1

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

SB8001

Lab Name: YTEST_ENV_INC Contract: 9421375

Lab Code: NYTEST Case No.: 22288 SAS No.: SDG No.: SKIN2

Matrix (soil/water): SOIL Lab Sample ID: 228816

Level (low/med): LOW Date Received: 10/13/94

% Solids: 85.7

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum				NR
7440-36-0	Antimony				NR
7440-38-2	Arsenic				NR
7440-39-3	Barium				NR
7440-41-7	Beryllium				NR
7440-43-9	Cadmium				NR
7440-70-2	Calcium				NR
7440-47-3	Chromium				NR
7440-48-4	Cobalt				NR
7440-50-8	Copper				NR
7439-89-6	Iron				NR
7439-92-1	Lead	47.4			P
7439-95-4	Magnesium				NR
7439-96-5	Manganese				NR
7439-97-6	Mercury				NR
7440-02-0	Nickel				NR
7440-09-7	Potassium				NR
7782-49-2	Selenium				NR
7440-22-4	Silver				NR
7440-23-5	Sodium				NR
7440-28-0	Thallium				NR
7440-62-2	Vanadium				NR
7440-66-6	Zinc				NR
5955-70-0	Cyanide				NR

Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: YELLOW Clarity After: CLEAR Artifacts:

Comments:

U.S. EPA - CLP

1

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

SB8002

Lab Name: YTEST_ENV_INC Contract: 9421375

Lab Code: NYTEST Case No.: 22288 SAS No.: SDG No.: SKIN2

Matrix (soil/water): SOIL Lab Sample ID: 228821

Level (low/med): LOW Date Received: 10/13/94

% Solids: 92.4

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum				NR
7440-36-0	Antimony				NR
7440-38-2	Arsenic				NR
7440-39-3	Barium				NR
7440-41-7	Beryllium				NR
7440-43-9	Cadmium				NR
7440-70-2	Calcium				NR
7440-47-3	Chromium				NR
7440-48-4	Cobalt				NR
7440-50-8	Copper				NR
7439-89-6	Iron				NR
7439-92-1	Lead	51.3			P
7439-95-4	Magnesium				NR
7439-96-5	Manganese				NR
7439-97-6	Mercury				NR
7440-02-0	Nickel				NR
7440-09-7	Potassium				NR
7782-49-2	Selenium				NR
7440-22-4	Silver				NR
7440-23-5	Sodium				NR
7440-28-0	Thallium				NR
7440-62-2	Vanadium				NR
7440-66-6	Zinc				NR
5955-70-0	Cyanide				NR

Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: YELLOW Clarity After: CLEAR Artifacts:

Comments:

U.S. EPA - CLP

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INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

SB8003

Lab Name: YTEST_ENV_INC Contract: 9421375

Lab Code: NYTEST Case No.: 22288 SAS No.: _____ SDG No.: SKIN2

Matrix (soil/water): SOIL Lab Sample ID: 228818

Level (low/med): LOW Date Received: 10/13/94

% Solids: 91.5

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum				NR
7440-36-0	Antimony				NR
7440-38-2	Arsenic				NR
7440-39-3	Barium				NR
7440-41-7	Beryllium				NR
7440-43-9	Cadmium				NR
7440-70-2	Calcium				NR
7440-47-3	Chromium				NR
7440-48-4	Cobalt				NR
7440-50-8	Copper				NR
7439-89-6	Iron				NR
7439-92-1	Lead	42.3			P
7439-95-4	Magnesium				NR
7439-96-5	Manganese				NR
7439-97-6	Mercury				NR
7440-02-0	Nickel				NR
7440-09-7	Potassium				NR
7782-49-2	Selenium				NR
7440-22-4	Silver				NR
7440-23-5	Sodium				NR
7440-28-0	Thallium				NR
7440-62-2	Vanadium				NR
7440-66-6	Zinc				NR
5955-70-0	Cyanide				NR

Color Before: BROWN Clarity Before: _____ Texture: MEDIUM

Color After: YELLOW Clarity After: CLEAR Artifacts: _____

Comments:

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INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

SB8101

Lab Name: YTEST_ENV_INC Contract: 9421375

Lab Code: NYTEST Case No.: 22288 SAS No.: _____ SDG No.: SKIN2

Matrix (soil/water): SOIL Lab Sample ID: 228810

Level (low/med): LOW Date Received: 10/13/94

% Solids: 90.4

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum				NR
7440-36-0	Antimony				NR
7440-38-2	Arsenic				NR
7440-39-3	Barium				NR
7440-41-7	Beryllium				NR
7440-43-9	Cadmium				NR
7440-70-2	Calcium				NR
7440-47-3	Chromium				NR
7440-48-4	Cobalt				NR
7440-50-8	Copper				NR
7439-89-6	Iron				NR
7439-92-1	Lead	91.5			P
7439-95-4	Magnesium				NR
7439-96-5	Manganese				NR
7439-97-6	Mercury				NR
7440-02-0	Nickel				NR
7440-09-7	Potassium				NR
7782-49-2	Selenium				NR
7440-22-4	Silver				NR
7440-23-5	Sodium				NR
7440-28-0	Thallium				NR
7440-62-2	Vanadium				NR
7440-66-6	Zinc				NR
5955-70-0	Cyanide				NR

Color Before: BROWN Clarity Before: _____ Texture: MEDIUM

Color After: YELLOW Clarity After: CLEAR Artifacts: _____

Comments:

1

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

SB8102

Lab Name: YTEST_ENV_INC Contract: 9421375

Lab Code: NYTEST Case No.: 22288 SAS No.: SDG No.: SKIN2

Matrix (soil/water): SOIL Lab Sample ID: 228805

Level (low/med): LOW Date Received: 10/13/94

% Solids: 93.7

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum				NR
7440-36-0	Antimony				NR
7440-38-2	Arsenic				NR
7440-39-3	Barium				NR
7440-41-7	Beryllium				NR
7440-43-9	Cadmium				NR
7440-70-2	Calcium				NR
7440-47-3	Chromium				NR
7440-48-4	Cobalt				NR
7440-50-8	Copper				NR
7439-89-6	Iron				NR
7439-92-1	Lead	31.9			P
7439-95-4	Magnesium				NR
7439-96-5	Manganese				NR
7439-97-6	Mercury				NR
7440-02-0	Nickel				NR
7440-09-7	Potassium				NR
7782-49-2	Selenium				NR
7440-22-4	Silver				NR
7440-23-5	Sodium				NR
7440-28-0	Thallium				NR
7440-62-2	Vanadium				NR
7440-66-6	Zinc				NR
5955-70-0	Cyanide				NR

Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: YELLOW Clarity After: CLEAR Artifacts:

Comments:

1

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

SB8103

Lab Name: YTEST_ENV_INC Contract: 9421375

Lab Code: NYTEST Case No.: 22288 SAS No.: SDG No.: SKIN2

Matrix (soil/water): SOIL Lab Sample ID: 228809

Level (low/med): LOW Date Received: 10/13/94

% Solids: 87.8

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum				NR
7440-36-0	Antimony				NR
7440-38-2	Arsenic				NR
7440-39-3	Barium				NR
7440-41-7	Beryllium				NR
7440-43-9	Cadmium				NR
7440-70-2	Calcium				NR
7440-47-3	Chromium				NR
7440-48-4	Cobalt				NR
7440-50-8	Copper				NR
7439-89-6	Iron				NR
7439-92-1	Lead	30.2			P
7439-95-4	Magnesium				NR
7439-96-5	Manganese				NR
7439-97-6	Mercury				NR
7440-02-0	Nickel				NR
7440-09-7	Potassium				NR
7782-49-2	Selenium				NR
7440-22-4	Silver				NR
7440-23-5	Sodium				NR
7440-28-0	Thallium				NR
7440-62-2	Vanadium				NR
7440-66-6	Zinc				NR
5955-70-0	Cyanide				NR

Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: YELLOW Clarity After: CLEAR Artifacts:

Comments:

1

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

SB8201

Lab Name: YTEST_ENV_INC Contract: 9421375

Lab Code: NYTEST Case No.: 22288 SAS No.: SDG No.: SKIN2

Matrix (soil/water): SOIL Lab Sample ID: 228812

Level (low/med): LOW Date Received: 10/13/94

% Solids: 88.3

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum				NR
7440-36-0	Antimony				NR
7440-38-2	Arsenic				NR
7440-39-3	Barium				NR
7440-41-7	Beryllium				NR
7440-43-9	Cadmium				NR
7440-70-2	Calcium				NR
7440-47-3	Chromium				NR
7440-48-4	Cobalt				NR
7440-50-8	Copper				NR
7439-89-6	Iron				NR
7439-92-1	Lead	71.9			P
7439-95-4	Magnesium				NR
7439-96-5	Manganese				NR
7439-97-6	Mercury				NR
7440-02-0	Nickel				NR
7440-09-7	Potassium				NR
7782-49-2	Selenium				NR
7440-22-4	Silver				NR
7440-23-5	Sodium				NR
7440-28-0	Thallium				NR
7440-62-2	Vanadium				NR
7440-66-6	Zinc				NR
5955-70-0	Cyanide				NR

Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: YELLOW Clarity After: CLEAR Artifacts:

Comments:

1

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

SB8202

Lab Name: YTEST_ENV_INC Contract: 9421375

Lab Code: NYTEST Case No.: 22288 SAS No.: _____ SDG No.: SKIN2

Matrix (soil/water): SOIL Lab Sample ID: 228815

Level (low/med): LOW Date Received: 10/13/94

% Solids: 90.7

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum				NR
7440-36-0	Antimony				NR
7440-38-2	Arsenic				NR
7440-39-3	Barium				NR
7440-41-7	Beryllium				NR
7440-43-9	Cadmium				NR
7440-70-2	Calcium				NR
7440-47-3	Chromium				NR
7440-48-4	Cobalt				NR
7440-50-8	Copper				NR
7439-89-6	Iron				NR
7439-92-1	Lead	109			P
7439-95-4	Magnesium				NR
7439-96-5	Manganese				NR
7439-97-6	Mercury				NR
7440-02-0	Nickel				NR
7440-09-7	Potassium				NR
7782-49-2	Selenium				NR
7440-22-4	Silver				NR
7440-23-5	Sodium				NR
7440-28-0	Thallium				NR
7440-62-2	Vanadium				NR
7440-66-6	Zinc				NR
5955-70-0	Cyanide				NR

Color Before: BROWN Clarity Before: _____ Texture: MEDIUM

Color After: YELLOW Clarity After: CLEAR Artifacts: _____

Comments:

U.S. EPA - CLP

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INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

SB8203

Lab Name: YTEST_ENV_INC Contract: 9421375

Lab Code: NYTEST Case No.: 22288 SAS No.: SDG No.: SKIN2

Matrix (soil/water): SOIL Lab Sample ID: 228804

Level (low/med): LOW Date Received: 10/13/94

% Solids: 92.5

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum				NR
7440-36-0	Antimony				NR
7440-38-2	Arsenic				NR
7440-39-3	Barium				NR
7440-41-7	Beryllium				NR
7440-43-9	Cadmium				NR
7440-70-2	Calcium				NR
7440-47-3	Chromium				NR
7440-48-4	Cobalt				NR
7440-50-8	Copper				NR
7439-89-6	Iron				NR
7439-92-1	Lead	72.9			P
7439-95-4	Magnesium				NR
7439-96-5	Manganese				NR
7439-97-6	Mercury				NR
7440-02-0	Nickel				NR
7440-09-7	Potassium				NR
7782-49-2	Selenium				NR
7440-22-4	Silver				NR
7440-23-5	Sodium				NR
7440-28-0	Thallium				NR
7440-62-2	Vanadium				NR
7440-66-6	Zinc				NR
5955-70-0	Cyanide				NR

Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: YELLOW Clarity After: CLEAR Artifacts:

Comments:

APPENDIX III

ANALYTICAL RESULTS - CONTAMINATED SOIL AREAS - PCB RESAMPLING

MEMORANDUM

DATE: March 29, 1995

TO: Mr. Jamie Bell
U.S. EPA Remedial Project Manager

FROM: Ronald F. Roelker, P.E.

XC: Greg Youngstrom, OEPA
Larry Bone, Skinner Landfill PRP Group
Ed Need, Rust E&I

SUBJECT: **Addendum #1**
Contaminated Soils Design Investigation (CSDI)
Skinner Landfill Remedial Design
Rust E&I Project No. 72680.301

1.0 INTRODUCTION

This addendum to the CSDI presents the results of the resampling and retesting of soil at Area GW-38. The resampling and retesting was required as a result of data obtained during the original CSDI field sampling and testing which was rejected in the validation process. A description of the data rejected from the original testing and scope of work for this resampling and testing effort is detailed in the resampling memorandum from Rust to USEPA dated January 24, 1995 provided in Appendix I. The scope of work outlined in the resampling memorandum was approved by USEPA on January 31, 1995.

2.0 METHODS

As noted in the resampling memorandum, the scope of work included drilling 3 new borings around Area GW-38 near the original locations of borings B-80, B-81 and B-82. Soil samples were obtained at depths of 0-2.0 ft, 3.5-5.0 ft and 6.0-7.5 ft. All sampling and testing for PCBs was conducted in accordance with the approved Remedial Design Investigation Field Sampling Plan.

3.0 RESULTS

3.1 Subsurface Conditions

A description of the subsurface conditions encountered is shown on the boring logs provided in Appendix II. The soils encountered were similar to those encountered during the original sampling event.

3.2 Soil Analytical Results

The results of PCB testing on the soil samples is provided in Appendix III, with the data validation documentation in Appendix IV. All data was acceptable and no PCBs were detected in the soil samples.

4.0 CONCLUSIONS

Based on results of this resampling and testing event, all conclusions and recommendations of the CSDI report pertaining to Area GW-38 are confirmed.

APPENDIX III

SUB-APPENDIX I

RUST ENVIRONMENT & INFRASTRUCTURE

MEMORANDUM

Cincinnati Division

Date: January 24, 1995

FILE

To: Bruce Sypniewski, USEPA
Greg Youngstrom, OEPA

cc: Larry Bone, Skinner Landfill PRP Group
Ed Fahrenkopf, RUST E&I
Ron Roelker RUST E&I
Ed Need, RUST E&I

From: Jim Veith

Project: Skinner Landfill

Subject: Contaminated Soils Design Investigation, PCBs

As discussed with you on the phone, validation of PCB analytical data has rejected the results on 19 of 36 soil samples obtained during the Contaminated Soils Design Investigation. You have also indicated that retesting of the retained soil samples is not satisfactory because holding times for the samples have been exceeded. Your recommendation is that new samples be obtained and retested.

We have reviewed the accepted PCB data with respect to locations and depths at the three potentially contaminated isolated areas, the Buried Pit (borings BP-01 and BP-02), GW-29 and GW-38, and offer the following recommendations for re-sampling and retesting. It should be noted that PCBs were not detected for any of the accepted test results.

Buried Pit Of the 9 soil samples obtained around BP-01 (3 borings, 3 samples per boring), the PCB analytical results of 6 samples representing the full depth explored have been accepted. Of the 9 samples around BP-02, the results of 4 samples representing the full depth explored have been accepted. Based on these results it is our opinion that PCBs are not of concern in the Buried Pit area. No re-sampling and retesting is required.

Monitoring Well GW-29 Of the 9 samples obtained near GW-29 (3 borings, 3 samples per boring), the PCB analytical results of 6 samples have been accepted. The accepted results represent the full depth explored, 0 to 7.5 ft. Based on these results, PCBs are not of concern in the area of GW-29 and no additional sampling and testing is required.

11785 Highway Drive, Suite 100, Cincinnati, Ohio, 45241, Phone: 513-733-9374, Fax: 513-733-8213

Monitoring Well GW-38 The PCB analytical results of only 1 sample of the 9 obtained around GW-38 has been accepted. We therefore recommend that 3 new borings be drilled around GW-38 with samples obtained at depths of 0 - 2.0 ft, 3.5 - 5.0 ft, and 6.0 - 7.5 ft. Sampling and testing for PCBs will be conducted in accordance with the approved Remedial Design Investigations Field Sampling Plan.

We plan to submit the CSDI report per the Work Plan schedule with commentary regarding the rejected PCB analytical results. An addendum to the report will be issued with the results of the re-sampling and retesting around GW--38. Please contact us if you have questions regarding the above recommendations or schedule for report submittal.

APPENDIX III

SUB-APPENDIX II

Client: Skinner PRP Group
Project: Skinner RDI - CSDI - Soil Resampling Event
Location: West Chester, Ohio Project No: 72680.301

LOG OF BORING NO. B-80R

DEPTH (feet)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE	RECOVERY (inches)	PID (ppm)	ELEV. (MSL) 883.97 (ft.)	STANDARD PENETRATION TEST DATA (blows/ft) 10 20 30 60 80	N VALUE
		Brown clayey sandy GRAVEL. (FILL)	SB8201	12	BG			30
			SB8202	4	BG			11
5						878.97		
			SB8203	N/A	BG			11
		Boring terminated at 7.5 ft.						
10						873.97		

DATE STARTED: 2-6-95 DATE FINISHED: 2-6-95

DRILLING METHOD: 4-1/4" ID Hollow Stem Auger

GEOLOGIST: P.D. Thompson DRILLER: J. Murphy

WATER LEVEL: --

NOTES:
BG = Background
FID background is 18 ppm.
N/A = Not Applicable

RUST Environment & Infrastructure

Client: Skinner PRP Group
Project: Skinner RDI - CSDI - Soil Resampling Event
Location: West Chester, Ohio Project No: 72680.301

LOG OF BORING NO. B-81R

DEPTH (feet)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE	RECOVERY (inches)	PID (ppm)	ELEV. (MSL) 883.69 (ft.)	STANDARD PENETRATION TEST DATA (blows/ft)	N VALUE
		Brown clayey SAND with gravel and limestone fragments.	SB8101	8	BG			46
		Brown CLAY with gravel and limestone fragments.	SB8102	3	BG			17
5		Brown sandy CLAY with gravel and limestone fragments.	SB8103	10	BG	878.69		8
		Boring terminated at 7.5 ft.						
10						873.69		

10 20 30 60 80

DATE STARTED: 2-6-95 DATE FINISHED: 2-6-95

DRILLING METHOD: 4-1/4" ID Hollow Stem Auger

GEOLOGIST: P.D. Thompson DRILLER: J. Murphy

WATER LEVEL: --

NOTES:
BG = Background
FID background is 18 ppm.

RUST Environment & Infrastructure

Client: Skinner PRP Group
Project: Skinner RDI - CSDI - Soil Resampling Event
Location: West Chester, Ohio Project No: 72680.301

LOG OF BORING NO. B-82R

DEPTH (feet)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE	RECOVERY (Inches)	PID (ppm)	ELEV. (MSL) 883.88 (ft.)	STANDARD PENETRATION TEST DATA (blows/ft) 10 20 30 6080	N VALUE
		Brown sandy CLAY with gravel. (FILL)	SB8001	15	BG			22
			SB8002	2	BG			9
5						878.88		
			SB8003	1.5	BG			5
		Boring terminated at 7.5 ft.						
10						873.88		

DATE STARTED: 2-6-95 DATE FINISHED: 2-6-95

DRILLING METHOD: 4-1/4" ID Hollow Stem Auger

GEOLOGIST: P.D. Thompson DRILLER: J. Murphy

WATER LEVEL: --

NOTES:
BG = Background
FID background is 18 ppm.

RUST Environment & Infrastructure

APPENDIX III

SUB-APPENDIX III

1D

EPA SAMPLE NO.

PESTICIDE ORGANICS ANALYSIS DATA SHEET

SB8001

Lab Name: NYTEST ENV INC Contract: 9521477

Lab Code: NYTEST Case No.: 23062 SAS No.: _____ SDG No.: _____

Matrix: (soil/water) SOIL Lab Sample ID: 2306201

Sample wt/vol: 30.0 (g/mL) G Lab File ID: _____

% Moisture: 18 decanted: (Y/N) N Date Received: 02/07/95

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 02/09/95 ✓

Concentrated Extract Volume: 5000 (uL) Date Analyzed: 02/24/95 ✓

Injection Volume: 1.00 (uL) Dilution Factor: 1.00 ✓

GPC Cleanup: (Y/N) Y ✓ pH: 6.9 Sulfur Cleanup: (Y/N) Y ✓

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
~~8001-35-2~~	~~Toxaphene~~	~~210~~	~~U~~
12674-11-2	Aroclor-1016	40	U
11104-28-2	Aroclor-1221	82	U
11141-16-5	Aroclor-1232	40	U
53469-21-9	Aroclor-1242	40	U
12672-29-6	Aroclor-1248	40	U
11097-69-1	Aroclor-1254	40	U
11096-82-5	Aroclor-1260	40	U

NA qy 3/11/95

CMM
7 MAR 95

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PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SB8002

Lab Name: NYTEST ENV INC Contract: 9521477

Lab Code: NYTEST Case No.: 23062 SAS No.: _____ SDG No.: _____

Matrix: (soil/water) SOIL Lab Sample ID: 2306202

Sample wt/vol: 30.0 (g/mL) G Lab File ID: _____

% Moisture: 18 decanted: (Y/N) N Date Received: 02/07/95

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 02/09/95 ✓

Concentrated Extract Volume: 5000 (uL) Date Analyzed: 02/24/95 ✓

Injection Volume: 1.00 (uL) Dilution Factor: 5.00 ✓

GPC Cleanup: (Y/N) Y ✓ pH: 6.5 Sulfur Cleanup: (Y/N) Y ✓

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
~~8001-35-2~~	~~Toxaphene~~	~~1000~~	~~U~~
12674-11-2	Aroclor-1016	200	U
11104-28-2	Aroclor-1221	410	U
11141-16-5	Aroclor-1232	200	U
53469-21-9	Aroclor-1242	200	U
12672-29-6	Aroclor-1248	200	U
11097-69-1	Aroclor-1254	200	U
11096-82-5	Aroclor-1260	200	U

WA 03/11/95

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7 MAR 95

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PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SB8003

Lab Name: NYTEST ENV INC Contract: 9521477

Lab Code: NYTEST Case No.: 23062 SAS No.: _____ SDG No.: _____

Matrix: (soil/water) SOIL Lab Sample ID: 2306203

Sample wt/vol: 30.0 (g/mL) G Lab File ID: _____

% Moisture: 24 decanted: (Y/N) N Date Received: 02/07/95

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 02/09/95 ✓

Concentrated Extract Volume: 5000 (uL) Date Analyzed: 02/24/95 ✓

Injection Volume: 1.00 (uL) Dilution Factor: 2.00 ✓

GPC Cleanup: (Y/N) Y ✓ pH: 6.7 Sulfur Cleanup: (Y/N) Y ✓

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q	
~~8001-35-2~~	~~Toxaphene~~	~~450~~	~~U~~	NA 4/23/95
12674-11-2	Aroclor-1016	87	U	
11104-28-2	Aroclor-1221	180	U	
11141-16-5	Aroclor-1232	87	U	
53469-21-9	Aroclor-1242	87	U	
12672-29-6	Aroclor-1248	87	U	
11097-69-1	Aroclor-1254	87	U	
11096-82-5	Aroclor-1260	87	U	

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EPA SAMPLE NO.

PESTICIDE ORGANICS ANALYSIS DATA SHEET

SB8101

Lab Name: NYTEST ENV INC Contract: 9521477

Lab Code: NYTEST Case No.: 23062 SAS No.: _____ SDG No.: _____

Matrix: (soil/water) SOIL Lab Sample ID: 2306207

Sample wt/vol: 30.0 (g/mL) G Lab File ID: _____

% Moisture: 12 decanted: (Y/N) N Date Received: 02/07/95

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 02/09/95 ✓

Concentrated Extract Volume: 5000 (uL) Date Analyzed: 02/24/95 ✓

Injection Volume: 1.00 (uL) Dilution Factor: 1.00 ✓

GPC Cleanup: (Y/N) Y ✓ pH: 6.7 Sulfur Cleanup: (Y/N) Y ✓

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q	
~~8001-35-2~~	~~Toxaphene~~	~~190~~	~~U~~	W# 03/31/95
12674-11-2	Aroclor-1016	37	U	
11104-28-2	Aroclor-1221	76	U	
11141-16-5	Aroclor-1232	37	U	
53469-21-9	Aroclor-1242	37	U	
12672-29-6	Aroclor-1248	37	U	
11097-69-1	Aroclor-1254	37	U	
11096-82-5	Aroclor-1260	37	U	

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PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SB8102

Lab Name: NYTEST ENV INC Contract: 9521477

Lab Code: NYTEST Case No.: 23062 SAS No.: _____ SDG No.: _____

Matrix: (soil/water) SOIL Lab Sample ID: 2306208

Sample wt/vol: 30.0 (g/mL) G Lab File ID: _____

% Moisture: 40 decanted: (Y/N) N Date Received: 02/07/95

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 02/09/95 ✓

Concentrated Extract Volume: 5000 (uL) Date Analyzed: 02/24/95 ✓

Injection Volume: 1.00 (uL) Dilution Factor: 2.00 ✓

GPC Cleanup: (Y/N) Y ✓ pH: 7.0 Sulfur Cleanup: (Y/N) Y ✓

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q	
~~8001-35-2~~	~~Toxaphene~~	~~570~~	~~U~~	NR 03/11/95
12674-11-2	Aroclor-1016	110	U	
11104-28-2	Aroclor-1221	220	U	
11141-16-5	Aroclor-1232	110	U	
53469-21-9	Aroclor-1242	110	U	
12672-29-6	Aroclor-1248	110	U	
11097-69-1	Aroclor-1254	110	U	
11096-82-5	Aroclor-1260	110	U	

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7 MAR95

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PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SB8103

Lab Name: NYTEST ENV INC Contract: 9521477

Lab Code: NYTEST Case No.: 23062 SAS No.: _____ SDG No.: _____

Matrix: (soil/water) SOIL Lab Sample ID: 2306209

Sample wt/vol: 30.0 (g/mL) G Lab File ID: _____

% Moisture: 21 decanted: (Y/N) N Date Received: 02/07/95

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 02/09/95 ✓

Concentrated Extract Volume: 5000 (uL) Date Analyzed: 02/24/95 ✓

Injection Volume: 1.00 (uL) Dilution Factor: 1.00 ✓

GPC Cleanup: (Y/N) Y ✓ pH: 6.6 Sulfur Cleanup: (Y/N) Y ✓

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg) UG/KG	Q
~~8001-35-2~~	~~Toxaphene~~	~~220~~	~~U~~
12674-11-2	Aroclor-1016	42	U
11104-28-2	Aroclor-1221	85	U
11141-16-5	Aroclor-1232	42	U
53469-21-9	Aroclor-1242	42	U
12672-29-6	Aroclor-1248	42	U
11097-69-1	Aroclor-1254	42	U
11096-82-5	Aroclor-1260	42	U

WA 02/31/95

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7 MAR95

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PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SB8201

Lab Name: NYTEST ENV INC Contract: 9521477

Lab Code: NYTEST Case No.: 23062 SAS No.: _____ SDG No.: _____

Matrix: (soil/water) SOIL Lab Sample ID: 2306204

Sample wt/vol: 30.0 (g/mL) G Lab File ID: _____

% Moisture: 16 decanted: (Y/N) N Date Received: 02/07/95

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 02/09/95 ✓

Concentrated Extract Volume: 5000 (uL) Date Analyzed: 02/24/95 ✓

Injection Volume: 1.00 (uL) Dilution Factor: 1.00 ✓

GPC Cleanup: (Y/N) Y ✓ pH: 6.4 Sulfur Cleanup: (Y/N) Y ✓

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
~~8001-35-2~~	~~Toxaphene~~	~~200~~	~~U~~
12674-11-2	Aroclor-1016	39	U
11104-28-2	Aroclor-1221	80	U
11141-16-5	Aroclor-1232	39	U
53469-21-9	Aroclor-1242	39	U
12672-29-6	Aroclor-1248	39	U
11097-69-1	Aroclor-1254	39	U
11096-82-5	Aroclor-1260	39	U

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PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SB8202

Lab Name: NYTEST ENV INC Contract: 9521477

Lab Code: NYTEST Case No.: 23062 SAS No.: _____ SDG No.: _____

Matrix: (soil/water) SOIL Lab Sample ID: 2306205

Sample wt/vol: 30.0 (g/mL) G Lab File ID: _____

% Moisture: 26 decanted: (Y/N) N Date Received: 02/07/95

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 02/09/95

Concentrated Extract Volume: 5000 (uL) Date Analyzed: 02/24/95

Injection Volume: 1.00 (uL) Dilution Factor: 1.00

GPC Cleanup: (Y/N) Y pH: 6.9 Sulfur Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q	
~~8001-35-2~~	~~Toxaphene~~	230	U	NA 02/31/95
12674-11-2	Aroclor-1016	45	U	
11104-28-2	Aroclor-1221	91	U	
11141-16-5	Aroclor-1232	45	U	
53469-21-9	Aroclor-1242	45	U	
12672-29-6	Aroclor-1248	45	U	
11097-69-1	Aroclor-1254	45	U	
11096-82-5	Aroclor-1260	45	U	

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EPA SAMPLE NO.

PESTICIDE ORGANICS ANALYSIS DATA SHEET

SB8203

Lab Name: NYTEST ENV INC Contract: 9521477

Lab Code: NYTEST Case No.: 23062 SAS No.: _____ SDG No.: _____

Matrix: (soil/water) SOIL Lab Sample ID: 2306206

Sample wt/vol: 30.0 (g/mL) G Lab File ID: _____

% Moisture: 17 decanted: (Y/N) N Date Received: 02/07/95

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 02/09/95 ✓

Concentrated Extract Volume: 5000 (uL) Date Analyzed: 02/24/95 ✓

Injection Volume: 1.00 (uL) Dilution Factor: 2.00 ✓

GPC Cleanup: (Y/N) Y ✓ pH: 6.4 Sulfur Cleanup: (Y/N) Y ✓

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q	
~~8001-35-2~~	~~Toxaphene~~	~~410~~	~~U~~	NR 02/11/95
12674-11-2	Aroclor-1016	80	U	
11104-28-2	Aroclor-1221	160	U	
11141-16-5	Aroclor-1232	80	U	
53469-21-9	Aroclor-1242	80	U	
12672-29-6	Aroclor-1248	80	U	
11097-69-1	Aroclor-1254	80	U	
11096-82-5	Aroclor-1260	80	U	

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APPENDIX III

SUB-APPENDIX IV

PCB Data Validation Summary
Skinner Landfill Site
West Chester, Ohio
Analytical Laboratory: NYTEST Environmental, Inc.
Sample Delivery Group 23062

Analytical results for nine (9) soil samples with matrix QC and one (1) field duplicate from the Skinner Landfill site were reviewed to evaluate the data quality. Data were assessed in accordance with the United States Environmental Protection Agency (USEPA) **National Functional Guidelines for Organic Data Review** (Draft 12/90, Revised 6/91) and the USEPA Region II document **CLP Organics Data Review and Preliminary Review** (SOP No. HW-6, Revision No. 8, January, 1992), where applicable. This validation pertains to the following samples collected by Rust Environment & Infrastructure (RUST) personnel on February 6, 1995.

SK-SB80-01	**SK-SB80-03**	**SK-SB82-01**
SK-SB80-01 MS	**SK-SB81-01**	**SK-SB82-02**
SK-SB80-01 MSD	**SK-SB81-02**	**SK-SB82-03**
SK-SB80-02	**SK-SB81-03**	**SK-SBFD-01**

The following items/criteria applicable to the samples listed above were reviewed:

- Deliverable Requirements
- Case Narrative
- Holding Times
- Surrogate Recoveries
- Matrix Spike/Matrix Spike Duplicate (MS/MSD) Results
- Method Blank Summary and Data
- Calibration and GC Performance
- Analyte Resolution Check
- Analytical Sequence
- Cleanup Efficiency
- PCB Identification
- Compound Quantitation and Reported Detection Limits
- Chromatogram Quality
- Field Duplicate Data

The above items were compliant with USEPA QC criteria with the exception of the items discussed in the following text. The data have been validated according to the above procedures and qualified as described on the attached definitions list.

Deliverable Requirements

As requested, only PCB results were reported for these samples.

Surrogate Recoveries

The recoveries for the surrogate compounds tetrachloro-m-xylene (TCX) and decachlorobiphenyl (DCB) are summarized below:

Sample ID	TCX DB-608	TCX DB-1701	DCB DB-608	DCB DB-1701
PBLK8	72	77	88	87
SK-SB80-01	62	58*	575*	91
SK-SB80-01 MS	65	59	535*	89
SK-SB80-01 MSD	66	72	922*	98
SK-SB80-02	77	115	1280*	121
SK-SB80-03	77	92	3425*	102
SK-SB81-01	74	84	103	86
SK-SB81-02	50*	66	715*	67
SK-SB81-03	75	89	265*	97
SK-SB82-01	68	78	145	83
SK-SB82-02	70	78	1160*	81
SK-SB82-03	63	65	885*	81
SK-SBFD-01	59*	66	94	71

** Values outside of advisory QC limits (60-150%).*

Please note that three of the samples exhibit low TCX recoveries and that the majority of the samples exhibited elevated DCB recoveries on the DB-608 analytical column. No data have been qualified based upon these surrogate recoveries, however, because the TCX and DCB QC limits are only advisory and at least one of the surrogates recovered within QC limits on each analytical column. Furthermore, the elevated recoveries would be indicative of a potential high bias and no PCBs were detected in any of the samples.

Field Duplicate Data

Sample SK-SBFD-01 is a field duplicate of sample SK-SB81-01. No target compounds were detected in either sample SK-SB81-01 or its field duplicate at comparable quantitation limits.

Summary

No reasons were found during the data validation process to qualify any of the sample results reported. In summary, based on 70 sample data points, none of which were qualified as estimated, and none qualified as unusable, the usability of this package is 100%.

Anthony M. Nace — 7 MARCH 95

Reviewed By — Date

El Falaky — 3-14-95

Approved By — Date

PCB Analytical Data

Skinner Landfill Site
West Chester, Ohio

Sampling Date: February 6, 1995
Remedial Design Investigation

Sample ID / Parameter	SK-SB80-01	SK-SB80-02	SK-SB80-03	SK-SB81-01	SK-SBFD-01	SK-SB81-02	SK-SB81-03	SK-SB82-01	SK-SB82-02	SK-SB82-03
Aroclor-1016	40 U	200 U	87 U	37 U	36 U	110 U	42 U	39 U	45 U	80 U
Aroclor-1221	82 U	410 U	180 U	76 U	74 U	220 U	85 U	80 U	91 U	160 U
Aroclor-1232	40 U	200 U	87 U	37 U	36 U	110 U	42 U	39 U	45 U	80 U
Aroclor-1242	40 U	200 U	87 U	37 U	36 U	110 U	42 U	39 U	45 U	80 U
Aroclor-1248	40 U	200 U	87 U	37 U	36 U	110 U	42 U	39 U	45 U	80 U
Aroclor-1254	40 U	200 U	87 U	37 U	36 U	110 U	42 U	39 U	45 U	80 U
Aroclor-1260	40 U	200 U	87 U	37 U	36 U	110 U	42 U	39 U	45 U	80 U

All results expressed in ug/Kg.
Sample SK-SBFD-01 is a field duplicate of sample SK-SB81-01.

Organic Data Qualifiers

U - The compound was analyzed for but not detected at or above the quantitation limit indicated.

J - The compound was analyzed for and determined to be present in the sample because the mass spectrum of the compound meets the identification criteria of the method. The concentration reported is an estimated value, less than the practical quantitation limit for the sample.

B - The compound is also found in an associated blank.

V - The reported value is considered estimated due to variance from quality control criteria

S - The reported value is suspected to be due to laboratory contamination.

R - The reported value is unusable and rejected due to variance from quality control criteria.

D - The reported value is taken from the analysis of a diluted sample.

E - The reported value exceeds the calibration range of the instrument.

N - Indicates presumptive evidence for compound identification.

A - Indicates that the compound is an aldol condensation product.

C - Compound identification has been qualitatively confirmed by GC/MS.

P - Indicates that the percent difference between the results from the two analytical columns is greater than 25%.

APPENDIX IV

NE CORNER TECHNICAL MEMORANDA

MEMORANDUM

DATE: October 28, 1994

TO: Bruce Sypniewski
U.S. EPA Remedial Project Manager

xc: Greg Youngstrom, OEPA
Larry Bone
Ed Need

FROM: Ron Roelker, P.E.

SUBJECT: **Technical Memorandum #1**
Northeast Corner Investigation
Skinner Landfill
RUST E&I Project No. 72680.300

1.0 INTRODUCTION

1.1 Background

As stated in the Skinner Landfill RD Investigation Field Sampling Plan (FSP), Section 2.2, Northeast Corner Investigation, the Skinner ROD/SOW indicates that a limited investigation in the northeast corner of the site is necessary to identify the type and extent of buried materials, if any. To attain this objective, the FSP outlines a scope of work which includes a review of aerial photographs and performance of an electromagnetic (EM) survey to identify anomalies which may represent buried waste. As presented in the FSP, this Technical Memorandum is submitted to present the results and conclusions of these studies.

1.2 Previous Work

Visual inspections in the Northeast Corner were conducted during preparation of the RD Work Plan. This work resulted in an Approximate Limit of Waste as shown on Drawing No. 7 of the Field Sampling Plan. The attached Figure 1 shows the Northeast Corner of the site based on the 1994 topographic mapping. On this figure are shown the Approximate Waste Limit and the Geophysical Grid Locations from Drawing 7 of the FSP.

2.0 METHODS

The review of aerial photographs and the EM survey were performed in general accordance with the FSP. Details and/or variations of the methods used are presented below.

2.1 EM Survey

Prior to conducting the EM survey, the northeast corner was cleared of brush and small trees by tracking with a dozer. Wooden lathes were set by registered surveyors (J. T. King Company) on 50 ft centers as shown on Figure 1.

The EM survey was conducted on October 20 and 24, 1994 by Ron Roelker and Sue Ferris. The data was collected manually by recording the instrument readings at discrete locations which were identified by using station numbers and offsets as shown on Figure 1. Two EM survey events were performed:

- Using a 50 ft by 50 ft grid over the entire area, and
- Using a 25 ft by 50 ft grid from Stations 0+50 to 5+50, 50 ft left to 250 ft left.

The second survey event was performed on a finer grid to delineate and confirm anomalies identified during the first survey event. The finer grid area is also shown on Figure 1. Several surface features were identified during the EM survey. Locations of these features were measured with respect to the grid and plotted.

2.2 Aerial Photographs

Aerial photographs of the project site were obtained for the years 1979, 1985, 1989 and 1994. Areas which appear to be fill areas relative to background areas were plotted on a 100 scale drawing of the northeast corner.

3.0 RESULTS

3.1 EM Survey

The results of both EM survey events were recorded manually on the Conductivity Field Data Sheets. Two numbers were recorded for each discrete grid location. The first number is the total subsurface conductivity in millimhos/meter. The second number (below the first) represents the relative disturbance from metallic objects. It is the ratio of the induced magnetic field to the

primary magnetic field in parts per thousand (ppt). A full explanation of the data results is provided in SOP-3 of the FSP.

Our interpretation of the EM survey data are shown on Figure 1. The EM Survey did not indicate the presence of buried waste outside the original Approximate Limit of Waste as presented in the FSP, Drawing No. 3. The hatched area represents grid points which exhibited very high anomalies for subsurface conductivity and magnetic field changes. Other very high anomalies were detected along the east and west borders along the fence line. These are interpreted to be caused by the fence and not by the subsurface conditions. One area between Stations 0+50 and 1+00, 100 ft. left, exhibited moderately lower conductivity readings, but no significant magnetic field change response.

The second survey, which utilized a finer grid performed on the west half of the Northeast Corner, generally confirmed the readings of the initial survey.

3.2 Aerial Photographs

A summary of the fill areas identified on the photos reviewed is provided on Figure 1 and are shown as the Photo Anomalies. In general, all observed fill areas were limited to the west half of the site within the Approximate Limit of Waste, except for one area at the southeast end of the Northeast Corner. In addition, excavation operations appear to be occurring at the northeast corner of the grid on the 1989 photo.

3.3 Surface Features

Figure 1 also shows the location of two areas at the Northeast Corner where waste materials currently appear to be present at the surface. The area near Station 3+00, 100 ft. left is a surface depression which is filled with tires. The area around Station 4+50, 250 ft. left is a mound of tanish white fill material similar in appearance to clay soil.

Other topographic features observed include an edge of a shallow slope which runs within and along the east side of the Approximate Limit of Waste. Also, at the northwest area of the grid near Station 1+00, 100 ft left, a cut about 50 ft long and 6 ft at the highest point is present.

4.0 CONCLUSIONS

Based on the analysis of information obtained in this study, RUST concludes that buried waste is most likely limited to the southwest area of the Northeast Corner, except for two non-contiguous areas to the southeast. Specifically, buried waste is anticipated to be limited to the

area outlined on Figure 2, Proposed Limit of Waste.

The two non-contiguous areas to the southeast were identified by recent field observations and an aerial photograph from 1979 and both appear to be a tannish white fill material and visually are consistent with lime sludge from water treatment plants known to have been deposited in this area. These areas are identified on Figure 2 as the Non-contiguous Areas.

The moderate conductivity anomalies encountered at the northwest area of the grid appears to have been caused by the current topography. The current topography in that area consists of a 6-ft-deep cut. This cut correlates well with the area of excavation shown on the aerial photograph from 1989.

5.0 RECOMMENDATIONS

5.1 Limits of Waste Confirmation

We recommend that the area outlined on Figure 2 be the Proposed Limit of Waste. To confirm this, we also recommend that five test pits be excavated to confirm the Proposed Limit of Waste. Two test pits will be located on the west and east sides of the Proposed Limit of Waste at the approximate locations shown on Figure 2.

In the FSP, 10 test pits were proposed for identification of the Limit of Waste in the Northeast corner (see Drawing 6 of the FSP). Based on the results of the EM survey, test pits as shown on attached Figure 2 will define the waste limits for design of the final cover system.

The test pits will be initiated in an area of known waste, excavated vertically until waste is encountered and then excavated laterally outward until no waste is encountered. Visual observation of the waste limits will be made during test pit excavations. No samples will be obtained. These results will be used to modify the Proposed Limit of Waste, if necessary.

5.2 Non-contiguous Areas

In accordance with the FSP, the two non-contiguous areas shown on Figure 2 will be sampled. The samples will be field-screened with a PID and for beta and gamma radiation. Each sample will be submitted to the laboratory for analysis of the entire CLP target compound list and target analyte list.

6.0 CLOSING

The results of recommendations performed as noted in Section 5.1 and 5.2 of TM #1 will be summarized and reported in TM #2. Information from TM #1 and #2 will be used to assist in development of the Contaminated Soils Design Investigation Report and design of the landfill cap.

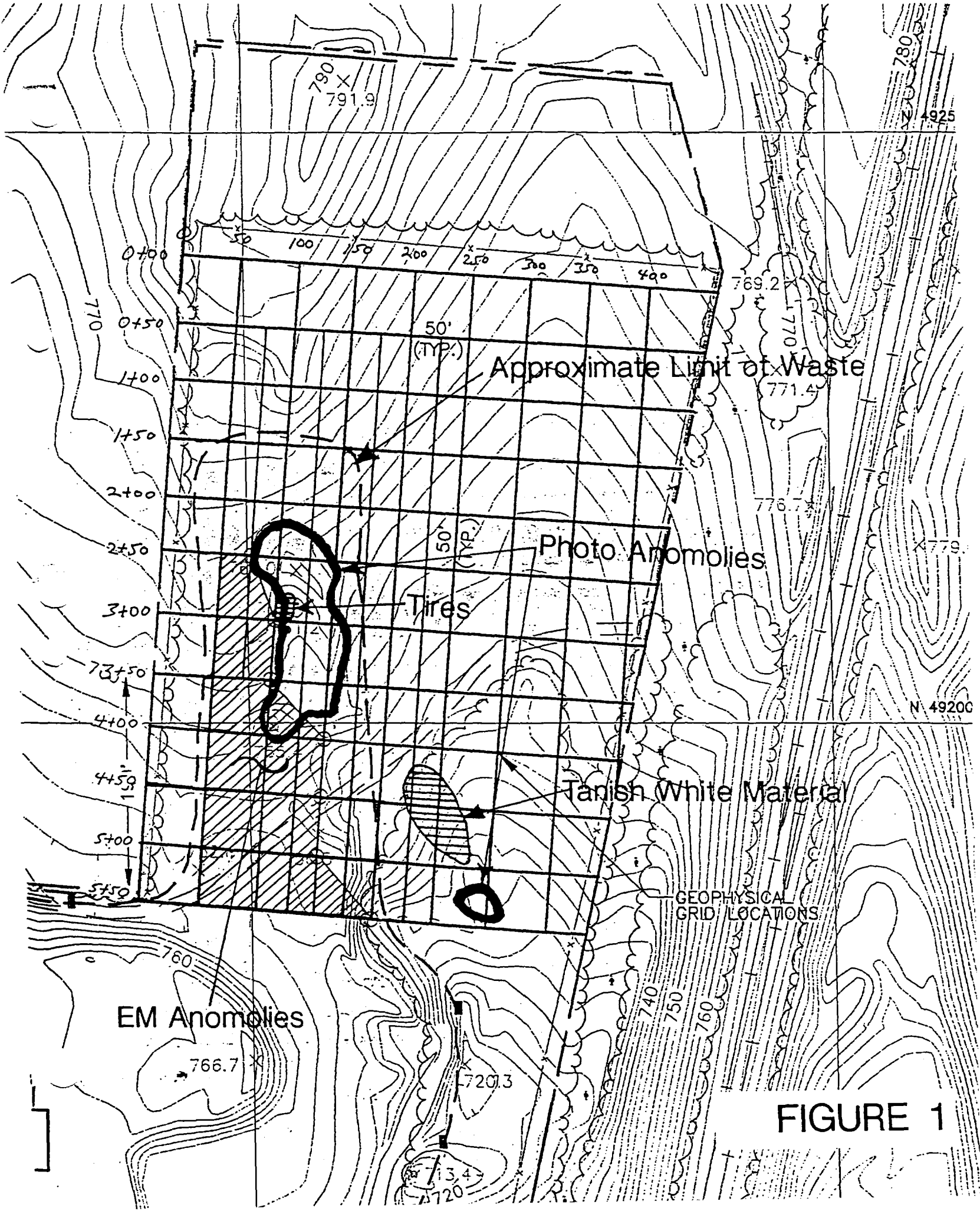
Approximate Limit of Waste
Photo Anomolies
Tires
Tanish White Material
EM Anomolies
GEOPHYSICAL GRID LOCATIONS
N 4925
N 4920
0+00
0+50
1+00
1+50
2+00
2+50
3+00
3+50
4+00
4+50
5+00
5+50
50'
(TYP.)
791.9
769.2
771.4
766.7
720.3
713.4

FIGURE 1

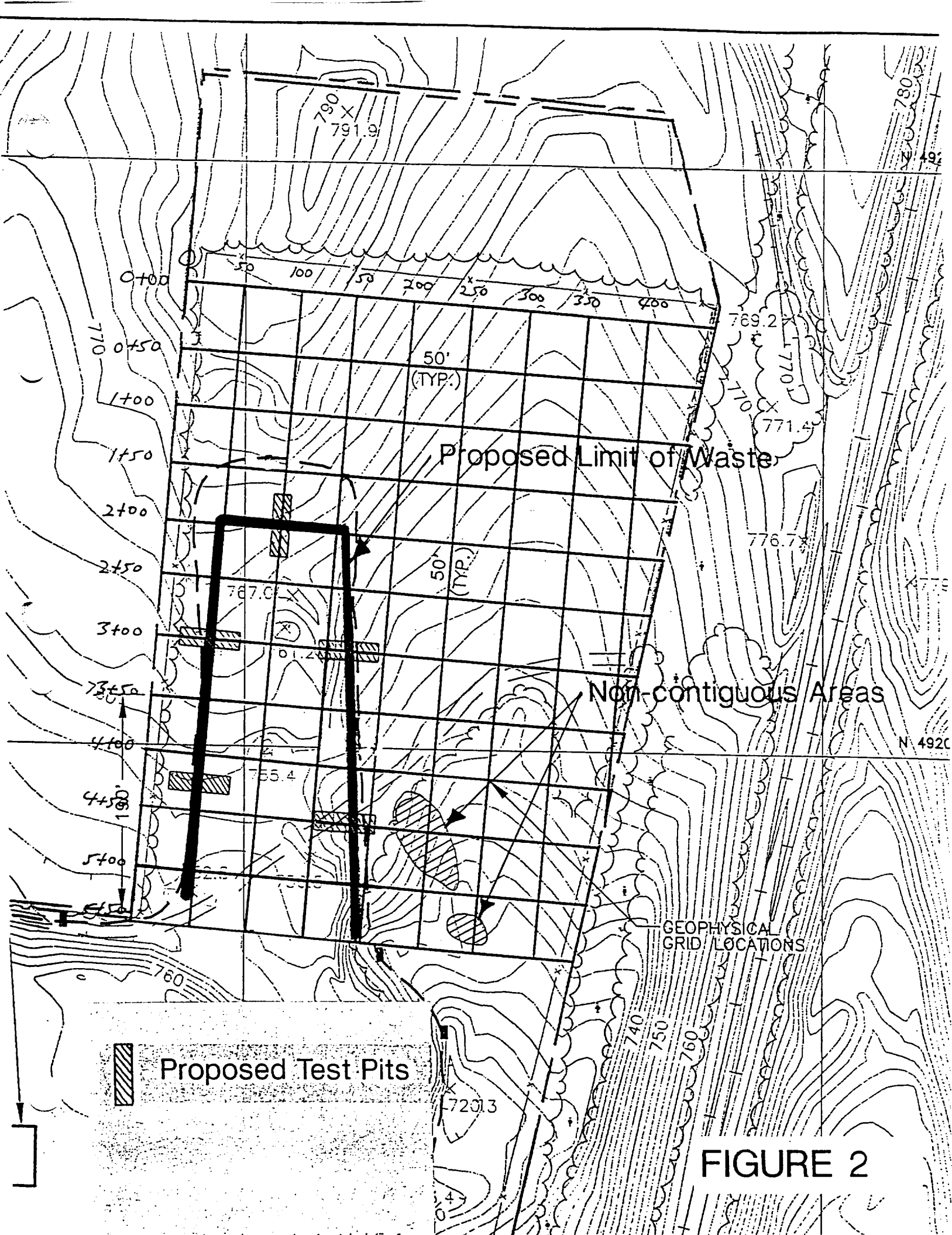
Proposed Limit of Waste
Non-contiguous Areas
GEOPHYSICAL GRID LOCATIONS
Proposed Test Pits
50' (TYP.)
50' (TYP.)
0+00
0+50
1+00
1+50
2+00
2+50
3+00
3+50
4+00
4+50
5+00
790
791.9
769.2
771.4
776.7
767.0
765.4
760
740
750
760
770
780

FIGURE 2

MEMORANDUM

DATE: November 3, 1994

TO: Bruce Sypniewski
U.S. EPA Remedial Project Manager

xc: Greg Youngstrom, OEPA
Larry Bone
Ed Need

FROM: Ron Roelker, P.E.

SUBJECT: **Technical Memorandum #1 - Addendum #1**
Northeast Corner Investigation
Skinner Landfill
RUST E&I Project No. 72680.300

In response to USEPA and OEPA comments, we have issued this addendum to Technical Memorandum #1 to clarify the following items:

1. One grab sample will be obtained at each of the two non-contiguous areas. If, based on visual observations, more than one material can be identified within a non-contiguous area, additional grab samples will be obtained and analyzed.

2. The test pit dimension are discussed in the Field Sampling plan, Section 2.2. The width of a backhoe bucket will determine width of the test pits. The test pits will be excavated vertically until waste is encountered and then outward until the horizontal limit is encountered. Test pits will be backfilled the same day that they are excavated.

3. The FSP does not specify test pits in the non-contiguous areas. If it is decided to excavate the material and move to the landfill cap area (in lieu of extending the cap over the non-contiguous area), there will be a performance requirement (sampling and analysis) to confirm that all material is removed by the contractor.

4. The number of test pits will be increased from five to eight and excavated at the locations shown on the attached Figure 2.

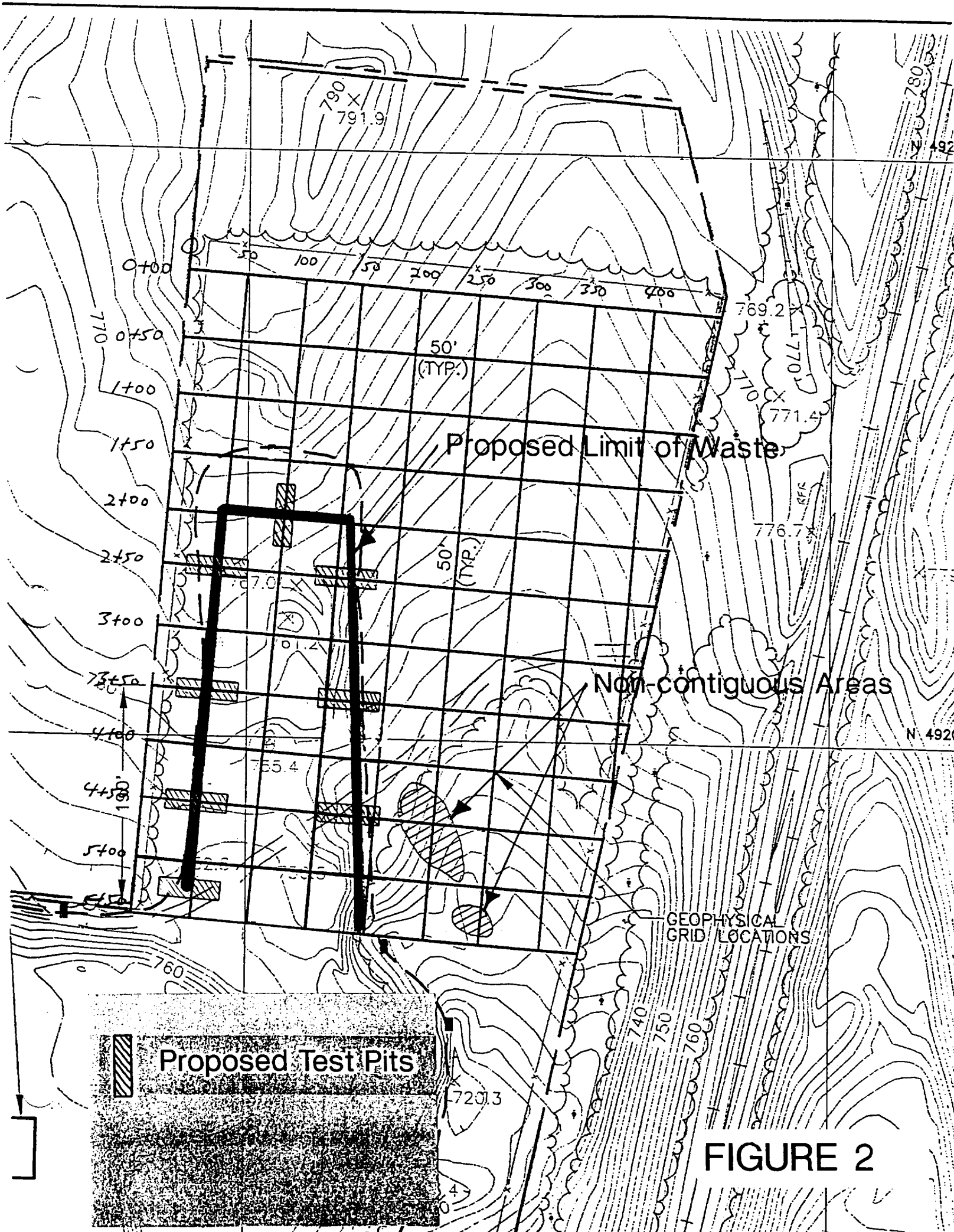
Proposed Limit of Waste
Non-contiguous Areas
GEOPHYSICAL GRID LOCATIONS
Proposed Test Pits
50' (TYP.)
0+00
0+50
1+00
1+50
2+00
2+50
3+00
3+50
4+00
4+50
5+00
100'
791.9
769.2
771.4
776.7
765.4
720.3

FIGURE 2

APPENDIX V

ANALYTICAL RESULTS - NON-CONTIGUOUS AREAS

EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

NC-01

Lab Name: NYTEST ENV INC Contract: 9421375

Lab Code: NYTEST Case No.: 22661 SAS No.: SDG No.: 22661

Matrix: (soil/water) SOIL Lab Sample ID: 2266101

Sample wt/vol: 5.0 (g/mL) G Lab File ID: P2128.D

Level: (low/med) LOW Date Received: 12/02/94

% Moisture: not dec. 19 Date Analyzed: 12/05/94

GC Column:CAP ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	Chloromethane	12	U
74-83-9	Bromomethane	12	U
75-01-4	Vinyl Chloride	12	U
75-00-3	Chloroethane	12	U
75-09-2	Methylene Chloride	6	J
67-64-1	Acetone	12	U
75-15-0	Carbon Disulfide	12	U
75-35-4	1,1-Dichloroethene	12	U
75-34-3	1,1-Dichloroethane	12	U
540-59-0	1,2-Dichloroethene (total)	12	U
67-66-3	Chloroform	12	U
107-06-2	1,2-Dichloroethane	12	U
78-93-3	2-Butanone	12	U
71-55-6	1,1,1-Trichloroethane	12	U
56-23-5	Carbon Tetrachloride	12	U
75-27-4	Bromodichloromethane	12	U
78-87-5	1,2-Dichloropropane	12	U
10061-01-5	cis-1,3-Dichloropropene	12	U
79-01-6	Trichloroethene	12	U
124-48-1	Dibromochloromethane	12	U
79-00-5	1,1,2-Trichloroethane	12	U
71-43-2	Benzene	12	U
10061-02-6	trans-1,3-Dichloropropene	12	U
75-25-2	Bromoform	12	U
108-10-1	4-Methyl-2-Pentanone	12	U
591-78-6	2-Hexanone	12	U
127-18-4	Tetrachloroethene	12	U
79-34-5	1,1,2,2-Tetrachloroethane	12	U
108-88-3	Toluene	7	J
108-90-7	Chlorobenzene	12	U
100-41-4	Ethylbenzene	12	U
100-42-5	Styrene	12	U
1330-20-7	Xylene (total)	12	U

00015

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

NC-01

Lab Name: NYTEST ENV INC Contract: 9421375

Lab Code: NYTEST Case No.: 22661 SAS No.: SDG No.: 22661

Matrix: (soil/water) SOIL Lab Sample ID: 2266101

Sample wt/vol: 5.0 (g/mL) G Lab File ID: P2128.D

Level: (low/med) LOW Date Received: 12/02/94

% Moisture: not dec. 19 Date Analyzed: 12/05/94

GC Column:CAP ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

Number TICs found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.					
2.					
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SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

NC-01

Lab Name: NYTEST ENV INC Contract: 9421375

Lab Code: NYTEST Case No.: 22661 SAS No.: SDG No.: 22661

Matrix: (soil/water) SOIL Lab Sample ID: 2266101

Sample wt/vol: 30.0 (g/mL) G Lab File ID: S2118.D

Level: (low/med) LOW Date Received: 12/02/94

% Moisture: 19 decanted: (Y/N) N Date Extracted:12/05/94

Concentrated Extract Volume: 500(UL) Date Analyzed: 12/23/94

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 7.1

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	410	U
111-44-4	bis(2-Chloroethyl)Ether	410	U
95-57-8	2-Chlorophenol	410	U
541-73-1	1,3-Dichlorobenzene	410	U
106-46-7	1,4-Dichlorobenzene	410	U
95-50-1	1,2-Dichlorobenzene	410	U
95-48-7	2-Methylphenol	410	U
108-60-1	2,2'-oxybis(1-Chloropropane)	410	U
106-44-5	4-Methylphenol	410	U
621-64-7	N-Nitroso-di-n-propylamine	410	U
67-72-1	Hexachloroethane	410	U
98-95-3	Nitrobenzene	410	U
78-59-1	Isophorone	410	U
88-75-5	2-Nitrophenol	410	U
105-67-9	2,4-Dimethylphenol	410	U
120-83-2	2,4-Dichlorophenol	410	U
120-82-1	1,2,4-Trichlorobenzene	410	U
91-20-3	Naphthalene	410	U
106-47-8	4-Chloroaniline	410	U
87-68-3	Hexachlorobutadiene	410	U
111-91-1	bis(2-Chloroethoxy)methane	410	U
59-50-7	4-Chloro-3-Methylphenol	410	U
91-57-6	2-Methylnaphthalene	410	U
77-47-4	Hexachlorocyclopentadiene	410	U
88-06-2	2,4,6-Trichlorophenol	410	U
95-95-4	2,4,5-Trichlorophenol	990	U
91-58-7	2-Chloronaphthalene	410	U
88-74-4	2-Nitroaniline	990	U
131-11-3	Dimethylphthalate	410	U
208-96-8	Acenaphthylene	410	U
606-20-2	2,6-Dinitrotoluene	410	U
99-09-2	3-Nitroaniline	990	U
83-32-9	Acenaphthene	410	U

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

NC-01

Lab Name: NYTEST ENV INC Contract: 9421375

Lab Code: NYTEST Case No.: 22661 SAS No.: SDG No.: 22661

Matrix: (soil/water) SOIL Lab Sample ID: 2266101

Sample wt/vol: 30.0 (g/mL) G Lab File ID: S2118.D

Level: (low/med) LOW Date Received: 12/02/94

% Moisture: 19 decanted: (Y/N) N Date Extracted:12/05/94

Concentrated Extract Volume: 500(UL) Date Analyzed: 12/23/94

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 7.1

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
51-28-5	2,4-Dinitrophenol	990	U
100-02-7	4-Nitrophenol	990	U
132-64-9	Dibenzofuran	410	U
121-14-2	2,4-Dinitrotoluene	410	U
84-66-2	Diethylphthalate	410	U
7005-72-3	4-Chlorophenyl-phenylether	410	U
86-73-7	Fluorene	410	U
100-01-6	4-Nitroaniline	990	U
534-52-1	4,6-Dinitro-2-methylphenol	990	U
86-30-6	N-Nitrosodiphenylamine (1)	410	U
101-55-3	4-Bromophenyl-phenylether	410	U
118-74-1	Hexachlorobenzene	410	U
87-86-5	Pentachlorophenol	990	U
85-01-8	Phenanthrene	410	U
120-12-7	Anthracene	410	U
86-74-8	Carbazole	410	U
84-74-2	Di-n-butylphthalate	410	U
206-44-0	Fluoranthene	410	U
129-00-0	Pyrene	410	U
85-68-7	Butylbenzylphthalate	410	U
91-94-1	3,3'-Dichlorobenzidine	410	U
56-55-3	Benzo(a)anthracene	410	U
218-01-9	Chrysene	410	U
117-81-7	bis(2-Ethylhexyl)phthalate	110	JB
117-84-0	Di-n-octylphthalate	410	U
205-99-2	Benzo(b)fluoranthene	410	U
207-08-9	Benzo(k)fluoranthene	410	U
50-32-8	Benzo(a)pyrene	410	U
193-39-5	Indeno(1,2,3-cd)pyrene	410	U
53-70-3	Dibenz(a,h)anthracene	410	U
191-24-2	Benzo(g,h,i)perylene	410	U

(1) - Cannot be separated from Diphenylamine

1F

EPA SAMPLE NO.

NC-01

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: NYTEST ENV INC Contract: 9421375

Lab Code: NYTEST Case No.: 22661 SAS No.: SDG No.: 22661

Matrix: (soil/water) SOIL Lab Sample ID: 2266101

Sample wt/vol: 30.0 (g/mL) G Lab File ID: S2118.D

Level: (low/med) LOW Date Received: 12/02/94

% Moisture: 19 decanted: (Y/N) N Date Extracted:12/05/94

Concentrated Extract Volume: 500(uL) Date Analyzed: 12/23/94

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 7.1

Number TICs found: 10

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		UNKNOWN	4.594	9400	JAB
2.		UNKNOWN AROMATIC	5.979	400	J
3.		UNKNOWN	8.491	1000	J
4.		UNKNOWN	10.535	320	J
5.		UNKNOWN	15.055	550	J
6.		UNKNOWN	17.775	310	J
7.		UNKNOWN	22.521	350	J
8.		UNKNOWN HYDROCARBON	25.656	400	J
9.		UNKNOWN HYDROCARBON	27.890	720	J
10.		UNKNOWN	33.138	450	J
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EPA SAMPLE NO.

PESTICIDE ORGANICS ANALYSIS DATA SHEET

NC-01

Lab Name: NYTEST ENV INC Contract: 9421375

Lab Code: NYTEST Case No.: 22661 SAS No.: _____ SDG No.: _____

Matrix: (soil/water) SOIL Lab Sample ID: 2266101

Sample wt/vol: 30.0 (g/mL) G Lab File ID: _____

% Moisture: 19 decanted: (Y/N) N Date Received: 12/02/94

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 12/05/94

Concentrated Extract Volume: 5000 (uL) Date Analyzed: 12/17/94

Injection Volume: 1.00 (uL) Dilution Factor: 1.00

GPC Cleanup: (Y/N) Y pH: 7.1 Sulfur Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	2.1	U
319-85-7	beta-BHC	2.1	U
319-86-8	delta-BHC	2.1	U
58-89-9	gamma-BHC (Lindane)	2.1	U
76-44-8	Heptachlor	2.1	U
309-00-2	Aldrin	2.1	U
1024-57-3	Heptachlor epoxide	2.1	U
959-98-8	Endosulfan I	2.1	U
60-57-1	Dieldrin	4.1	U
72-55-9	4,4'-DDE	4.1	U
72-20-8	Endrin	4.1	U
33213-65-9	Endosulfan II	4.1	U
72-54-8	4,4'-DDD	4.1	U
1031-07-8	Endosulfan sulfate	4.1	U
50-29-3	4,4'-DDT	4.1	U
72-43-5	Methoxychlor	21	U
53494-70-5	Endrin ketone	4.1	U
7421-93-4	Endrin aldehyde	4.1	U
5103-71-9	alpha-Chlordane	2.1	U
5103-74-2	gamma-Chlordane	2.1	U
8001-35-2	Toxaphene	210	U
12674-11-2	Aroclor-1016	41	U
11104-28-2	Aroclor-1221	83	U
11141-16-5	Aroclor-1232	41	U
53469-21-9	Aroclor-1242	41	U
12672-29-6	Aroclor-1248	41	U
11097-69-1	Aroclor-1254	41	U
11096-82-5	Aroclor-1260	41	U

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INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

NC-01

Lab Name: NYTEST_ENV_INC Contract: 9421375

Lab Code: NYTEST Case No.: 22661 SAS No.: _____ SDG No.: 22661

Matrix (soil/water): SOIL Lab Sample ID: 266101

Level (low/med): LOW Date Received: 12/02/94

% Solids: 81.1

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	6380		*	P
7440-36-0	Antimony	8.9	U	N	P
7440-38-2	Arsenic	7.4		S	F
7440-39-3	Barium	69.1			P
7440-41-7	Beryllium	0.47	U		P
7440-43-9	Cadmium	0.47	U		P
7440-70-2	Calcium	237000		*	P
7440-47-3	Chromium	7.9		*	P
7440-48-4	Cobalt	5.5	B		P
7440-50-8	Copper	10.8			P
7439-89-6	Iron	15900		*	P
7439-92-1	Lead	13.8			F
7439-95-4	Magnesium	7610		*	P
7439-96-5	Manganese	1240			P
7439-97-6	Mercury	0.12	U		CV
7440-02-0	Nickel	12.8			P
7440-09-7	Potassium	1000	B		P
7782-49-2	Selenium	1.2	U	WN	F
7440-22-4	Silver	1.2	U		P
7440-23-5	Sodium	132	B		P
7440-28-0	Thallium	1.2	U		F
7440-62-2	Vanadium	15.8			P
7440-66-6	Zinc	36.6		*	P
5955-70-0	Cyanide	0.60	U		AS

Color Before: BROWN Clarity Before: _____ Texture: MEDIUM

Color After: YELLOW Clarity After: CLEAR Artifacts: _____

Comments:

CA_AT_A_4X_DILUTION.

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

NC-02

Lab Name: NYTEST ENV INC Contract: 9421375

Lab Code: NYTEST Case No.: 22661 SAS No.: SDG No.: 22661

Matrix: (soil/water) SOIL Lab Sample ID: 2266102

Sample wt/vol: 5.0 (g/mL) G Lab File ID: P2130.D

Level: (low/med) LOW Date Received: 12/02/94

% Moisture: not dec. 28 Date Analyzed: 12/05/94

GC Column:CAP ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	Chloromethane	14	U
74-83-9	Bromomethane	14	U
75-01-4	Vinyl Chloride	14	U
75-00-3	Chloroethane	14	U
75-09-2	Methylene Chloride	6	J
67-64-1	Acetone	3	J
75-15-0	Carbon Disulfide	14	U
75-35-4	1,1-Dichloroethene	14	U
75-34-3	1,1-Dichloroethane	14	U
540-59-0	1,2-Dichloroethene (total)	14	U
67-66-3	Chloroform	14	U
107-06-2	1,2-Dichloroethane	14	U
78-93-3	2-Butanone	14	U
71-55-6	1,1,1-Trichloroethane	14	U
56-23-5	Carbon Tetrachloride	14	U
75-27-4	Bromodichloromethane	14	U
78-87-5	1,2-Dichloropropane	14	U
10061-01-5	cis-1,3-Dichloropropene	14	U
79-01-6	Trichloroethene	14	U
124-48-1	Dibromochloromethane	14	U
79-00-5	1,1,2-Trichloroethane	14	U
71-43-2	Benzene	14	U
10061-02-6	trans-1,3-Dichloropropene	14	U
75-25-2	Bromoform	14	U
108-10-1	4-Methyl-2-Pentanone	14	U
591-78-6	2-Hexanone	14	U
127-18-4	Tetrachloroethene	14	U
79-34-5	1,1,2,2-Tetrachloroethane	14	U
108-88-3	Toluene	14	U
108-90-7	Chlorobenzene	14	U
100-41-4	Ethylbenzene	14	U
100-42-5	Styrene	14	U
1330-20-7	Xylene (total)	14	U

1E

EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

NC-02

Lab Name: NYTEST ENV INC Contract: 9421375

Lab Code: NYTEST Case No.: 22661 SAS No.: SDG No.: 22661

Matrix: (soil/water) SOIL Lab Sample ID: 2266102

Sample wt/vol: 5.0 (g/mL) G Lab File ID: P2130.D

Level: (low/med) LOW Date Received: 12/02/94

% Moisture: not dec. 28 Date Analyzed: 12/05/94

GC Column:CAP ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

Number TICs found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.					
2.					
3.					
4.					
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SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

NC-02

Lab Name: NYTEST ENV INC Contract: 9421375

Lab Code: NYTEST Case No.: 22661 SAS No.: SDG No.: 22661

Matrix: (soil/water) SOIL Lab Sample ID: 2266102

Sample wt/vol: 30.0 (g/mL) G Lab File ID: S2119.D

Level: (low/med) LOW Date Received: 12/02/94

% Moisture: 28 decanted: (Y/N) N Date Extracted:12/05/94

Concentrated Extract Volume: 500(UL) Date Analyzed: 12/23/94

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 6.7

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	460	U
111-44-4	bis(2-Chloroethyl)Ether	460	U
95-57-8	2-Chlorophenol	460	U
541-73-1	1,3-Dichlorobenzene	460	U
106-46-7	1,4-Dichlorobenzene	460	U
95-50-1	1,2-Dichlorobenzene	460	U
95-48-7	2-Methylphenol	460	U
108-60-1	2,2'-oxybis(1-Chloropropane)	460	U
106-44-5	4-Methylphenol	460	U
621-64-7	N-Nitroso-di-n-propylamine	460	U
67-72-1	Hexachloroethane	460	U
98-95-3	Nitrobenzene	460	U
78-59-1	Isophorone	460	U
88-75-5	2-Nitrophenol	460	U
105-67-9	2,4-Dimethylphenol	460	U
120-83-2	2,4-Dichlorophenol	460	U
120-82-1	1,2,4-Trichlorobenzene	460	U
91-20-3	Naphthalene	460	U
106-47-8	4-Chloroaniline	460	U
87-68-3	Hexachlorobutadiene	460	U
111-91-1	bis(2-Chloroethoxy)methane	460	U
59-50-7	4-Chloro-3-Methylphenol	460	U
91-57-6	2-Methylnaphthalene	460	U
77-47-4	Hexachlorocyclopentadiene	460	U
88-06-2	2,4,6-Trichlorophenol	460	U
95-95-4	2,4,5-Trichlorophenol	1100	U
91-58-7	2-Chloronaphthalene	460	U
88-74-4	2-Nitroaniline	1100	U
131-11-3	Dimethylphthalate	460	U
208-96-8	Acenaphthylene	460	U
606-20-2	2,6-Dinitrotoluene	460	U
99-09-2	3-Nitroaniline	1100	U
83-32-9	Acenaphthene	460	U

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

NC-02

Lab Name: NYTEST ENV INC Contract: 9421375

Lab Code: NYTEST Case No.: 22661 SAS No.: SDG No.: 22661

Matrix: (soil/water) SOIL Lab Sample ID: 2266102

Sample wt/vol: 30.0 (g/mL) G Lab File ID: S2119.D

Level: (low/med) LOW Date Received: 12/02/94

% Moisture: 28 decanted: (Y/N) N Date Extracted: 12/05/94

Concentrated Extract Volume: 500 (UL) Date Analyzed: 12/23/94

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 6.7

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
51-28-5	2,4-Dinitrophenol	1100	U
100-02-7	4-Nitrophenol	1100	U
132-64-9	Dibenzofuran	460	U
121-14-2	2,4-Dinitrotoluene	460	U
84-66-2	Diethylphthalate	460	U
7005-72-3	4-Chlorophenyl-phenylether	460	U
86-73-7	Fluorene	460	U
100-01-6	4-Nitroaniline	1100	U
534-52-1	4,6-Dinitro-2-methylphenol	1100	U
86-30-6	N-Nitrosodiphenylamine (1)	460	U
101-55-3	4-Bromophenyl-phenylether	460	U
118-74-1	Hexachlorobenzene	460	U
87-86-5	Pentachlorophenol	1100	U
85-01-8	Phenanthrene	460	U
120-12-7	Anthracene	460	U
86-74-8	Carbazole	460	U
84-74-2	Di-n-butylphthalate	460	U
206-44-0	Fluoranthene	460	U
129-00-0	Pyrene	460	U
85-68-7	Butylbenzylphthalate	460	U
91-94-1	3,3'-Dichlorobenzidine	460	U
56-55-3	Benzo(a)anthracene	460	U
218-01-9	Chrysene	460	U
117-81-7	bis(2-Ethylhexyl)phthalate	460	U
117-84-0	Di-n-octylphthalate	460	U
205-99-2	Benzo(b)fluoranthene	460	U
207-08-9	Benzo(k)fluoranthene	460	U
50-32-8	Benzo(a)pyrene	460	U
193-39-5	Indeno(1,2,3-cd)pyrene	460	U
53-70-3	Dibenz(a,h)anthracene	460	U
191-24-2	Benzo(g,h,i)perylene	460	U

(1) - Cannot be separated from Diphenylamine

00022

1F

EPA SAMPLE NO.

NC-02

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: NYTEST ENV INC Contract: 9421375

Lab Code: NYTEST Case No.: 22661 SAS No.: SDG No.: 22661

Matrix: (soil/water) SOIL Lab Sample ID: 2266102

Sample wt/vol: 30.0 (g/mL) G Lab File ID: S2119.D

Level: (low/med) LOW Date Received: 12/02/94

% Moisture: 28 decanted: (Y/N) N Date Extracted:12/05/94

Concentrated Extract Volume: 500(uL) Date Analyzed: 12/23/94

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 6.7

Number TICs found: 2

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		UNKNOWN	4.592	9400	JAB
2.		UNKNOWN HYDROCARBON	22.502	520	J
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					
11.					
12.					
13.					
14.					
15.					
16.					
17.					
18.					
19.					
20.					
21.					
22.					
23.					
24.					
25.					
26.					
27.					
28.					
29.					
30.					

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

NC-02

Lab Name: NYTEST ENV INC Contract: 9421375

Lab Code: NYTEST Case No.: 22661 SAS No.: _____ SDG No.: _____

Matrix: (soil/water) SOIL Lab Sample ID: 2266102

Sample wt/vol: 30.0 (g/mL) G Lab File ID: _____

% Moisture: 28 decanted: (Y/N) N Date Received: 12/02/94

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 12/05/94

Concentrated Extract Volume: 5000 (uL) Date Analyzed: 12/17/94

Injection Volume: 1.00 (uL) Dilution Factor: 1.00

GPC Cleanup: (Y/N) Y pH: 6.7 Sulfur Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	2.4	U
319-85-7	beta-BHC	2.4	U
319-86-8	delta-BHC	2.4	U
58-89-9	gamma-BHC (Lindane)	2.4	U
76-44-8	Heptachlor	2.4	U
309-00-2	Aldrin	2.4	U
1024-57-3	Heptachlor epoxide	2.4	U
959-98-8	Endosulfan I	2.4	U
60-57-1	Dieldrin	4.6	U
72-55-9	4,4'-DDE	4.6	U
72-20-8	Endrin	4.6	U
33213-65-9	Endosulfan II	4.6	U
72-54-8	4,4'-DDD	4.6	U
1031-07-8	Endosulfan sulfate	4.6	U
50-29-3	4,4'-DDT	4.6	U
72-43-5	Methoxychlor	24	U
53494-70-5	Endrin ketone	4.6	U
7421-93-4	Endrin aldehyde	4.6	U
5103-71-9	alpha-Chlordane	2.4	U
5103-74-2	gamma-Chlordane	2.4	U
8001-35-2	Toxaphene	240	U
12674-11-2	Aroclor-1016	46	U
11104-28-2	Aroclor-1221	93	U
11141-16-5	Aroclor-1232	46	U
53469-21-9	Aroclor-1242	46	U
12672-29-6	Aroclor-1248	46	U
11097-69-1	Aroclor-1254	46	U
11096-82-5	Aroclor-1260	46	U

1

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

NC-02

Lab Name: NYTEST_ENV_INC Contract: 9421375

Lab Code: NYTEST Case No.: 22661 SAS No.: SDG No.: 22661

Matrix (soil/water): SOIL Lab Sample ID: 266102

Level (low/med): LOW Date Received: 12/02/94

% Solids: 72.2

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	1540		*	P
7440-36-0	Antimony	10.2	U	N	P
7440-38-2	Arsenic	13.9			F
7440-39-3	Barium	723			P
7440-41-7	Beryllium	0.54	U		P
7440-43-9	Cadmium	0.71	B		P
7440-70-2	Calcium	349000		*	P
7440-47-3	Chromium	3.8		*	P
7440-48-4	Cobalt	1.7	B		P
7440-50-8	Copper	2.7	B		P
7439-89-6	Iron	6250		*	P
7439-92-1	Lead	4.5			F
7439-95-4	Magnesium	8930		*	P
7439-96-5	Manganese	212			P
7439-97-6	Mercury	0.14	U		CV
7440-02-0	Nickel	7.0	U		P
7440-09-7	Potassium	226	U		P
7782-49-2	Selenium	12.9	U	WN	F
7440-22-4	Silver	1.3	U		P
7440-23-5	Sodium	244	B		P
7440-28-0	Thallium	1.3	U	W	F
7440-62-2	Vanadium	5.1	B		P
7440-66-6	Zinc	7.7		*	P
5955-70-0	Cyanide	0.66	U		AS

Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

APPENDIX VI

ANALYTICAL VALIDATION DOCUMENTATION

Semivolatile Organic Data Validation Summary (PAHs Only)
Skinner Landfill Site
West Chester, Ohio
Analytical Laboratory: NYTEST Environmental, Inc.
Sample Delivery Group SKIN2

Analytical results for 25 soil samples with matrix QC, two (2) field duplicates and two (2) field blanks from the Skinner Landfill site were reviewed to evaluate the data quality. Data were assessed in accordance with the United States Environmental Protection Agency (USEPA) **National Functional Guidelines for Organic Data Review** (Draft 12/90, Revised 6/91) and the USEPA Region II document **CLP Organics Data Review and Preliminary Review** (SOP No. HW-6, Revision No. 8, January, 1992), where applicable. This validation pertains to the following samples collected by Rust Environment & Infrastructure (RUST) personnel on October 11, 12 and 14, 1994.

SK-SB50-01	**SK-SB55-01 MSD**	**SK-SB58-03**	**SK-SB82-01**
SK-SB50-02	**SK-SB55-02**	**SK-SB59-01**	**SK-SB82-02**
SK-SB50-03	**SK-SB55-03**	**SK-SB80-01**	**SK-SB82-03**
SK-SB51-01	**SK-SB57-01**	**SK-SB80-02**	**SK-SBFD-01**
SK-SB51-02	**SK-SB57-02**	**SK-SB80-03**	**SK-SBFD-02**
SK-SB51-03	**SK-SB57-03**	**SK-SB81-01**	**SK-SBFB-01**
SK-SB55-01	**SK-SB58-01**	**SK-SB81-02**	**SK-SBFB-02**
SK-SB55-01 MS	**SK-SB58-02**	**SK-SB81-03**	

The following items/criteria applicable to the samples listed above were reviewed:

- Deliverable Requirements
- Case Narrative
- Holding Times
- Surrogate Recoveries
- Matrix Spike/Matrix Spike Duplicate (MS/MSD) Results
- Blank Summary and Data
- GC/MS Instrument Performance Check
- Target Compound Identification/Quantitation
- Quantitation Reports and Mass Spectral Data
- Initial and Continuing Calibration Data
- Internal Standard Areas and Retention Times
- Field Duplicate Data

The above items were in compliance with USEPA QC criteria with the exception of the items discussed in the following text. The data have been validated according to the above procedures and qualified as described on the attached definitions list.

Deliverable Requirements

As requested, only data for polynuclear aromatic hydrocarbons (PAHs) were reported.

The Soil Semivolatile Matrix Spike/Matrix Spike Duplicate Recovery Summary (Form III) incorrectly specified the QC limits for acenaphthene and pyrene for the MS. These errors were corrected during data validation and no data have been qualified based upon this laboratory error.

The laboratory incorrectly reported the area, upper limit and lower limit on the Semivolatile Internal Standard Area and RT Summary (Form VIII) for the internal standard compound 1,4-dichlorobenzene-d4 for the continuing calibration standard analyzed on 11/22/94. These errors were corrected during validation, and it was verified that each of the samples associated with this standard met all applicable QC criteria. The Form VII has been corrected by the validator and no data have been qualified based upon this laboratory error.

Surrogate Recoveries

The surrogate compound nitrobenzene-d5 exhibited recoveries outside of QC limits (23-120%) for two (2) samples: SK-SB58-03 (2%) and SK-SB80-01 (20%).

The surrogate 2-fluorobiphenyl exhibited a recovery outside of QC limits (30-115%) for sample SK-SB58-03 (15%).

The surrogate compound 1,2-dichlorobenzene-d5 exhibited recoveries outside of QC limits (20-130%) for two (2) samples: SK-SB58-03 (1%) and SK-SB80-01 (10%).

The results for sample SK-SB58-03 have been rejected and are considered unusable due to the extremely low (<10%) surrogate recoveries exhibited. The results for sample SK-SB80-01 have been flagged with a "V" and are considered estimated with a potential low bias due to the low surrogate recoveries.

Matrix Spike/Matrix Spike Duplicate (MS/MSD) Data

MS/MSD data which fails to meet QC criteria is summarized in the table below. No data have been qualified based upon this data, however, because MS/MSD data are only advisory and other data does not indicate the need to qualify the results reported.

	MS	MSD		QC LIMITS	
	%R	%R	RPD	RPD	%R
Compound					
Acenaphthene	100	130	26*	19	31-137
Pyrene	30*	375*	170*	36	35-142

** Indicates value outside of QC limits.*

Table 1
RPD Calculations - Field Duplicate Analysis

Compound	SB8101	SBFD01	RPD
Naphthalene	370 U	400 U	0.0%
Acenaphthylene	370 U	400 U	0.0%
Acenaphthene	370 U	400 U	0.0%
Fluorene	370 U	400 U	0.0%
Phenanthrene	160 J	98 J	48.1%
Anthracene	370 U	400 U	0.0%
Fluoranthene	290 J	180 J	46.8%
Pyrene	260 J	160 J	47.6%
Benzo(a)anthracene	130 J	76 J	52.4%
Chrysene	160 J	120 J	28.6%
Benzo(b)fluoranthene	99 J	85 J	15.2%
Benzo(k)fluoranthene	79 J	62 J	24.1%
Benzo(a)pyrene	77 J	46 J	50.4%
Indeno(1,2,3-cd)pyrene	54 J	400 U	200.0%
Dibenz(a,h)anthracene	370 U	400 U	7.8%
Benzo(g,h,i)perylene	63 J	400 U	200.0%

All results expressed in ug/Kg.
Standard Organic Data Qualifiers have been applied.

Compound	SB5003	SBFD02	RPD
Naphthalene	82 J	1900 U	200.0%
Acenaphthylene	780 U	1900 U	0.0%
Acenaphthene	230 J	230 J	0.0%
Fluorene	230 J	210 J	9.1%
Phenanthrene	2300	2300	0.0%
Anthracene	360 J	280 J	25.0%
Fluoranthene	3800	3900	2.6%
Pyrene	3500	3600	2.8%
Benzo(a)anthracene	1700	1600 J	6.1%
Chrysene	2100	2000	4.9%
Benzo(b)fluoranthene	1200	1400 J	15.4%
Benzo(k)fluoranthene	850	1100 J	25.6%
Benzo(a)pyrene	1100	1000 J	9.5%
Indeno(1,2,3-cd)pyrene	620 J	520 J	17.5%
Dibenz(a,h)anthracene	780 U	1900 U	0.0%
Benzo(g,h,i)perylene	650 J	480 J	30.1%

All results expressed in ug/Kg.
Standard Organic Data Qualifiers have been applied.

Initial and Continuing Calibration Data

The percent difference (%D) between the average relative response factor (RRF) for the initial calibration and the RRF for the continuing calibration standard analyzed on 11/25/94 for the compound dibenz(a,h)anthracene (-25.7) exceeded the QC limit of 25.0%D specified in the SOW. Although the SOW allows for up to four (4) semivolatile compounds in a continuing calibration to fail to meet specifications, the dibenz(a,h)anthracene results associated with this continuing calibration standard have been flagged with a "V" and are considered estimated in accordance with USEPA data validation guidelines. Please note that estimated data are considered valid and usable and that this continuing calibration is fully compliant and usable.

Field Duplicate Data

Sample SK-SBFD-01 is a field duplicate of sample SK-SB81-01 and sample SK-SBFD-02 is a field duplicate of sample SK-SB50-03. Table 1 summarizes the relative percent difference (RPD) between the results of each of these samples and the associated field duplicate. Although there are no QC limits for field duplicate RPD data, RUST considers an RPD of 40 or less indicative of acceptable sampling and analytical precision. It should be noted, however, that elevated RPD values for results below the contract required quantitation limit (CRQL) are not unexpected and are generally not indicative of unacceptable sampling and analytical precision. The field duplicate RPD data presented in Table 1 are considered indicative of acceptable sampling and analytical precision.

Summary

In summary, based on 432 sample data points, three (3) of which were qualified as estimated, and 16 qualified as unusable, and since estimated data are considered valid and usable, the usability of this data package is 96.3%.

Anthony M. Rock — Reviewed By — 18 JANUARY 95 — Date

Approved By — 1-22-95 — Date

Semivolatile Organic Analytical Data (PAHs Only)

Skinner Landfill Site
West Chester, Ohio

Sampling Dates: October 11, 12 and 14, 1994
Remedial Design Investigation

Compound	SK-SB50-01	SK-SB50-02	SK-SB50-03	SK-SB51-01	SK-SB51-02	SK-SB51-03	SK-SB55-01	SK-SB55-02	SK-SB55-03	SK-SB57-01
Naphthalene	1900 U	1800 U	82 J	380 U	110 J	58 J	4000 U	2000 U	830 U	95 J
Acenaphthylene	1900 U	200 J	780 U	380 U	65 J	410 U	4000 U	2000 U	830 U	350 U
Acenaphthene	300 J	600 J	230 J	92 J	530	96 J	4000 U	2000 U	830 U	350 U
Fluorene	240 J	790 J	230 J	89 J	680	130 J	4000 U	2000 U	830 U	350 U
Phenanthrene	2900	6500	2300	1100	2700	610	3600 J	440 J	440 J	350 U
Anthracene	410 J	1000 J	360 J	160 J	770	110 J	400 J	2000 U	830 U	350 U
Fluoranthene	5400	9800	3800	2000	2600	630	6100	990 J	980	350 U
Pyrene	4800	9600	3500	2000	2600	560	5500	890 J	880	350 U
Benzo(a)anthracene	2300	4600	1700	940	1400	260 J	2300 J	360 J	370 J	350 U
Chrysene	2800	5700	2100	1200	1400	290 J	2900 J	490 J	500 J	350 U
Benzo(b)fluoranthene	1600 J	3400	1200	660	780	160 J	1400 J	270 J	260 J	350 U
Benzo(k)fluoranthene	1300 J	2400	850	580	610	140 J	1500 J	250 J	230 J	350 U
Benzo(a)pyrene	1400 J	3000	1100	590	800	140 J	1400 J	210 J	220 J	350 U
Indeno(1,2,3-cd)pyrene	840 J	1300 J	620 J	330 J	400	76 J	1000 J	2000 U	160 J	350 U
Dibenz(a,h)anthracene	1900 U	1800 U	780 U	380 U	370 U	410 U	4000 UV	2000 UV	830 UV	350 U
Benzo(g,h,i)perylene	950 J	1200 J	650 J	340 J	410	78 J	1100 J	2000 U	170 J	350 U

All results expressed in ug/Kg, except for SK-SBFB-01 and SK-SBFB02 which are expressed in ug/L.
Standard Organic Data Qualifiers have been applied.
Samples SK-SBFB-01 and SK-SBFB-02 are field blanks.
Sample SK-SBFD-01 is a field duplicate of sample SK-SB81-01.
Sample SK-SBFD-02 is a field duplicate of sample SK-SB50-03.

Semivolatile Organic Analytical Data (PAHs Only)

Skinner Landfill Site
West Chester, Ohio

Sampling Dates: October 11, 12 and 14, 1994
Remedial Design Investigation

Compound	SK-SB57-02	SK-SB57-03	SK-SB58-01	SK-SB58-02	SK-SB58-03	SK-SB59-01	SK-SB80-01	SK-SB80-02	SK-SB80-03	SK-SB81-01
Naphthalene	350 U	**41 J**	350 U	350 U	R	340 U	390 U	**90 J**	360 U	370 U
Acenaphthylene	350 U	350 U	350 U	350 U	R	340 U	**50 J**	720 U	360 U	370 U
Acenaphthene	350 U	350 U	350 U	350 U	R	340 U	390 U	720 U	360 U	370 U
Fluorene	350 U	350 U	350 U	350 U	R	340 U	390 U	720 U	360 U	370 U
Phenanthrene	350 U	350 U	350 U	350 U	R	340 U	**620**	**360 J**	**140 J**	**160 J**
Anthracene	350 U	350 U	350 U	350 U	R	340 U	**110 J**	720 U	360 U	370 U
Fluoranthene	350 U	350 U	350 U	350 U	R	340 U	**790**	**570 J**	**230 J**	**290 J**
Pyrene	350 U	350 U	350 U	350 U	R	340 U	**960**	**560 J**	**280 J**	**260 J**
Benzo(a)anthracene	350 U	350 U	350 U	350 U	R	340 U	**540**	**290 J**	**140 J**	**130 J**
Chrysene	350 U	350 U	350 U	350 U	R	340 U	**630**	**390 J**	**190 J**	**160 J**
Benzo(b)fluoranthene	350 U	350 U	350 U	350 U	R	340 U	**320 J**	**370 J**	**110 J**	**99 J**
Benzo(k)fluoranthene	350 U	350 U	350 U	350 U	R	340 U	**290 J**	**180 J**	**120 J**	**79 J**
Benzo(a)pyrene	350 U	350 U	350 U	350 U	R	340 U	**310 J**	**190 J**	**91 J**	**77 J**
Indeno(1,2,3-cd)pyrene	350 U	350 U	350 U	350 U	R	340 U	**140 J**	**180 J**	**76 J**	**54 J**
Dibenz(a,h)anthracene	350 U	350 U	350 U	350 U	R	340 U	390 U	720 U	360 U	370 U
Benzo(g,h,i)perylene	350 U	350 U	350 U	350 U	R	340 U	**150 J**	**250 J**	**100 J**	**63 J**

All results expressed in ug/Kg, except for SK-SK-SBFB-01 and SK-SK-SBFB02 which are expressed in ug/L.
Standard Organic Data Qualifiers have been applied.
Samples SK-SBFB-01 and SK-SBFB-02 are field blanks.
Sample SK-SBFD-01 is a field duplicate of sample SK-SB81-01.
Sample SK-SBFD-02 is a field duplicate of sample SK-SB50-03.

Semivolatile Organic Analytical Data (PAHs Only)

Skinner Landfill Site
West Chester, Ohio

Sampling Dates: October 11, 12 and 14, 1994
Remedial Design Investigation

Compound	SK-SB81-02	SK-SB81-03	SK-SB82-01	SK-SB82-02	SK-SB82-03	SK-SBFB-01	SK-SBFB-02	SK-SBFD-01	SK-SBFD-02
Naphthalene	350 U	380 U	1900 U	1800 U	**76 J**	10 U	10 U	400 U	1900 U
Acenaphthylene	350 U	380 U	1900 U	1800 U	**94 J**	10 U	10 U	400 U	1900 U
Acenaphthene	350 U	380 U	1900 U	1800 U	**96 J**	10 U	10 U	400 U	**230 J**
Fluorene	350 U	380 U	1900 U	1800 U	**89 J**	10 U	10 U	400 U	**210 J**
Phenanthrene	**81 J**	**58 J**	**960 J**	**2000**	**990**	10 U	10 U	**98 J**	**2300**
Anthracene	350 U	380 U	1900 U	**340 J**	**200 J**	10 U	10 U	400 U	**280 J**
Fluoranthene	**180 J**	**110 J**	**2000**	**4200**	**1900**	10 U	10 U	**180 J**	**3900**
Pyrene	**170 J**	**100 J**	**1700 J**	**3900**	**1900**	10 U	10 U	**160 J**	**3600**
Benzo(a)anthracene	**100 J**	**56 J**	**840 J**	**1900**	**1000**	10 U	10 U	**76 J**	**1600 J**
Chrysene	**120 J**	**76 J**	**1100 J**	**2500**	**1300**	10 U	10 U	**120 J**	**2000**
Benzo(b)fluoranthene	**73 J**	**47 J**	**690 J**	**1600 J**	**750**	10 U	10 U	**85 J**	**1400 J**
Benzo(k)fluoranthene	**64 J**	**38 J**	**580 J**	**1200 J**	**660 J**	10 U	10 U	**62 J**	**1100 J**
Benzo(a)pyrene	**71 J**	380 U	**580 J**	**1400 J**	**720 J**	10 U	10 U	**46 J**	**1000 J**
Indeno(1,2,3-cd)pyrene	**43 J**	380 U	**450 J**	**970 J**	**480 J**	10 U	10 U	400 U	**520 J**
Dibenz(a,h)anthracene	350 U	380 U	1900 U	1800 U	720 U	10 U	10 U	400 U	1900 U
Benzo(g,h,i)perylene	**47 J**	380 U	**520 J**	**1000 J**	**510 J**	10 U	10 U	400 U	**480 J**

All results expressed in ug/Kg, except for SK-SBFB-01 and SK-SBFB02 which are expressed in ug/L.
Standard Organic Data Qualifiers have been applied.
Samples SK-SBFB-01 and SK-SBFB-02 are field blanks.
Sample SK-SBFD-01 is a field duplicate of sample SK-SB81-01.
Sample SK-SBFD-02 is a field duplicate of sample SK-SB50-03.

Semivolatile Organic Data Validation Summary (PAHs Only)
Skinner Landfill Site
West Chester, Ohio
Analytical Laboratory: NYTEST Environmental, Inc.
Sample Delivery Group SKIN3

Analytical results for nine (9) soil samples with matrix QC, two (2) field duplicates and two (2) field blanks from the Skinner Landfill site were reviewed to evaluate the data quality. Data were assessed in accordance with the United States Environmental Protection Agency (USEPA) **National Functional Guidelines for Organic Data Review** (Draft 12/90, Revised 6/91) and the USEPA Region II document **CLP Organics Data Review and Preliminary Review** (SOP No. HW-6, Revision No. 8, January, 1992), where applicable. This validation pertains to the following samples collected by Rust Environment & Infrastructure (RUST) personnel on October 13, 1994.

SK-SB52-01	**SK-SB54-01 MSD**
SK-SB52-02	**SK-SB54-02**
SK-SB52-03	**SK-SB54-03**
SK-SB53-01	**SK-SBFD-03**
SK-SB53-02	**SK-SBFD-04**
SK-SB53-03	**SK-SBFB-03**
SK-SB54-01	**SK-SBFB-04**
SK-SB54-01 MS	

The following items/criteria applicable to the samples listed above were reviewed:

- Deliverable Requirements
- Case Narrative
- Holding Times
- Surrogate Recoveries
- Matrix Spike/Matrix Spike Duplicate (MS/MSD) Results
- Blank Summary and Data
- GC/MS Instrument Performance Check
- Target Compound Identification/Quantitation
- Quantitation Reports and Mass Spectral Data
- Initial and Continuing Calibration Data
- Internal Standard Areas and Retention Times
- Field Duplicate Data

The above items were in compliance with USEPA QC criteria with the exception of the items discussed in the following text. The data have been validated according to the above procedures and qualified as described on the attached definitions list.

Deliverable Requirements

As requested, only data for polynuclear aromatic hydrocarbons (PAHs) were reported.

Please note that the laboratory incorrectly identified sample SBFB03 as SBFB05. The validator has corrected this minor misidentification where necessary.

Initial and Continuing Calibration Data

The percent relative standard deviation (%RSD) for the compound benzo(k)fluoranthene (38.6) in the initial calibration for the instrument designated HPS exceeded the QC limit of 20.5%RSD specified in the Statement of Work (SOW). Although the SOW allows for up to four (4) semivolatile compounds in an initial calibration to fail to meet specifications, the benzo(k)fluoranthene results associated with this continuing calibration standard have been flagged with a "V" and are considered estimated in accordance with USEPA data validation guidelines. Please note that estimated data are considered valid and usable and that this calibration is fully compliant and usable.

Field Duplicate Data

Sample SK-SBFD-03 is a field duplicate of sample SK-SB52-02 and sample SK-SBFD-04 is a field duplicate of sample SK-SB53-03. Table 1 summarizes the relative percent difference (RPD) between the results of each of these samples and the associated field duplicate. Although there are no QC limits for field duplicate RPD data, RUST considers an RPD of 40 or less indicative of acceptable sampling and analytical precision. It should be noted, however, that elevated RPD values for results below the contract required quantitation limit (CRQL) are not unexpected and are generally not indicative of unacceptable sampling and analytical precision.

The field duplicate data reported indicates generally acceptable sampling and analytical precision, although the fluoranthene results reported for both sample SK-SB52-02 and its field duplicate (SK-SBFD-03) have been flagged with a "V" and are considered estimated due to the RPD of 64.8 between these results. It should be noted that each of these samples were diluted prior to analysis due to the viscosity of the extract and that different dilutions were used for the samples and the field duplicates, which may also explain the elevated RPD values noted for the results reported.

Summary

In summary, based on 176 sample data points, eleven (11) of which were qualified as estimated, and none qualified as unusable, and since estimated data are considered valid and usable, the usability of this data package is 100%.

Cinthony M. Nace — Reviewed By — 24 JANUARY 95 — Date

Ed Fuhrmann — Approved By — 1-24-95 — Date

Table 1
RPD Calculations - Field Duplicate Analysis

Compound	SB5202	SBFD03	RPD
Naphthalene	3800 U	110 J	200.0%
Acenaphthylene	3800 U	140 J	200.0%
Acenaphthene	3800 U	99 J	200.0%
Fluorene	470 J	360 J	26.5%
Phenanthrene	2600 J	1600	47.6%
Anthracene	570 J	390 J	37.5%
Fluoranthene	4700	2400	64.8%
Pyrene	3700 J	2100	55.2%
Benzo(a)anthracene	1900 J	1100	53.3%
Chrysene	1900 J	1100	53.3%
Benzo(b)fluoranthene	1400 J	780 J	56.9%
Benzo(k)fluoranthene	1500 J	920	47.9%
Benzo(a)pyrene	1300 J	770 J	51.2%
Indeno(1,2,3-cd)pyrene	410 J	250 J	48.5%
Dibenz(a,h)anthracene	3800 U	780 U	0.0%
Benzo(g,h,i)perylene	3800 U	200 J	200.0%

All results expressed in ug/Kg.
Standard Organic Data Qualifiers have been applied.

Compound	SB5303	SBFD04	RPD
Naphthalene	3900 U	1600 U	0.0%
Acenaphthylene	3900 U	1600 U	0.0%
Acenaphthene	3900 U	1600 U	0.0%
Fluorene	3900 U	1600 U	0.0%
Phenanthrene	1500 J	640 J	80.4%
Anthracene	3900 U	1600 U	0.0%
Fluoranthene	3400 J	1300 J	89.4%
Pyrene	2900 J	1200 J	82.9%
Benzo(a)anthracene	1200 J	470 J	87.4%
Chrysene	1500 J	580 J	88.5%
Benzo(b)fluoranthene	1100 J	440 J	85.7%
Benzo(k)fluoranthene	1200 J	440 J	92.7%
Benzo(a)pyrene	980 J	370 J	90.4%
Indeno(1,2,3-cd)pyrene	3900 U	1600 U	0.0%
Dibenz(a,h)anthracene	3900 U	1600 U	0.0%
Benzo(g,h,i)perylene	3900 U	1600 U	0.0%

All results expressed in ug/Kg.
Standard Organic Data Qualifiers have been applied.

Semivolatile Organic Analytical Data (PAHs Only)

Skinner Landfill Site
West Chester, Ohio

Sampling Date: October 13, 1994
Remedial Design Investigation

Sample ID / Compound	SK-SB52-01	SK-SB52-02	SK-SB52-03	SK-SB53-01	SK-SB53-02	SK-SB53-03	SK-SB54-01
Naphthalene	370 U	3800 U	**250 J**	3500 U	1600 U	3900 U	400 U
Acenaphthylene	370 U	3800 U	**160 J**	3500 U	1600 U	3900 U	400 U
Acenaphthene	370 U	3800 U	**150 J**	3500 U	1600 U	3900 U	400 U
Fluorene	370 U	**470 J**	**720 J**	3500 U	1600 U	3900 U	400 U
Phenanthrene	**230 J**	**2600 J**	**2500**	**1600 J**	**2000**	**1500 J**	**250 J**
Anthracene	**40 J**	**570 J**	**550 J**	3500 U	**310 J**	3900 U	400 U
Fluoranthene	**480**	**4700**	**2700 V**	**4000**	**3800**	**3400 J**	**530**
Pyrene	**440**	**3700 J**	**2200**	**3600**	**3500**	**2900 J**	**440**
Benzo(a)anthracene	**200 J**	**1900 J**	**1100**	**1300 J**	**1500 J**	**1200 J**	**210 J**
Chrysene	**230 J**	**1900 J**	**1000**	**1700 J**	**1800**	**1500 J**	**250 J**
Benzo(b)fluoranthene	**190 J**	**1400 J**	**810**	**1200 J**	**1000 J**	**1100 J**	**200 J**
Benzo(k)fluoranthene	**180 JV**	**1500 JV**	**760 JV**	**1700 JV**	**1100 JV**	**1200 JV**	**170 JV**
Benzo(a)pyrene	**150 J**	**1300 J**	**770 J**	**1200 J**	**1200 J**	**980 J**	**150 J**
Indeno(1,2,3-cd)pyrene	**66 J**	**410 J**	**240 J**	**420 J**	**400 J**	3900 U	**57 J**
Dibenz(a,h)anthracene	370 U	3800 U	790 U	3500 U	1600 U	3900 U	400 U
Benzo(g,h,i)perylene	**59 J**	3800 U	**180 J**	3500 U	**310 J**	3900 U	**41 J**

All results expressed in ug/Kg, except for SK-SBFB-03 and SK-SBFB-04 which are expressed in ug/L.
Standard Organic Data Qualifiers have been applied.
Samples SK-SBFB-03 and SK-SBFB-04 are field blanks.
Sample SK-SBFD-03 is a field duplicate of sample SK-SB52-02.
Sample SK-SBFD-04 is a field duplicate of sample SK-SB53-03.

Semivolatile Organic Analytical Data (PAHs Only)

Skinner Landfill Site
West Chester, Ohio

Sampling Date: October 13, 1994
Remedial Design Investigation

Sample ID / Compound	SK-SB54-02	SK-SB54-03	SK-SBFB-04	SK-SBFB05	SK-SBFD-03	SK-SBFD-04
Naphthalene	410 U	420 U	10 U	10 U	**110 J**	1600 U
Acenaphthylene	410 U	420 U	10 U	10 U	**140 J**	1600 U
Acenaphthene	410 U	420 U	10 U	10 U	**99 J**	1600 U
Fluorene	410 U	420 U	10 U	10 U	**360 J**	1600 U
Phenanthrene	**220 J**	**130 J**	10 U	10 U	**1600**	**640 J**
Anthracene	410 U	420 U	10 U	10 U	**390 J**	1600 U
Fluoranthene	**390 J**	**280 J**	10 U	10 U	**2400 V**	**1300 J**
Pyrene	**330 J**	**240 J**	10 U	10 U	**2100**	**1200 J**
Benzo(a)anthracene	**150 J**	**100 J**	10 U	10 U	**1100**	**470 J**
Chrysene	**170 J**	**130 J**	10 U	10 U	**1100**	**580 J**
Benzo(b)fluoranthene	**130 J**	**83 J**	10 U	10 U	**780 J**	**440 J**
Benzo(k)fluoranthene	**120 JV**	**130 JV**	10 U	10 U	**920 V**	**440 JV**
Benzo(a)pyrene	**99 J**	**77 J**	10 U	10 U	**770 J**	**370 J**
Indeno(1,2,3-cd)pyrene	410 U	420 U	10 U	10 U	**250 J**	1600 U
Dibenz(a,h)anthracene	410 U	420 U	10 U	10 U	780 U	1600 U
Benzo(g,h,i)perylene	410 U	420 U	10 U	10 U	**200 J**	1600 U

All results expressed in ug/Kg, except for SK-SBFB-03 and SK-SBFB-04 which are expressed in ug/L.
Standard Organic Data Qualifiers have been applied.
Samples SK-SBFB-03 and SK-SBFB-04 are field blanks.
Sample SK-SBFD-03 is a field duplicate of sample SK-SB52-02.
Sample SK-SBFD-04 is a field duplicate of sample SK-SB53-03.

Semivolatile Organic Data Validation Summary
Skinner Landfill Site
West Chester, Ohio
Analytical Laboratory: NYTEST Environmental, Inc.
Sample Delivery Group SKIN5

Analytical results for three (3) soil samples from the Skinner Landfill site were reviewed to evaluate the data quality. Data were assessed in accordance with the United States Environmental Protection Agency (USEPA) **National Functional Guidelines for Organic Data Review** (Draft 12/90, Revised 6/91) and the USEPA Region II document **CLP Organics Data Review and Preliminary Review** (SOP No. HW-6, Revision No. 8, January, 1992), where applicable. This validation pertains to the following samples collected by Rust Environment & Infrastructure (RUST) personnel on November 4, 1994.

SK-SB56-01
SK-SB56-02
SK-SB56-03

The following items/criteria applicable to the samples listed above were reviewed:

- Deliverable Requirements
- Case Narrative
- Holding Times
- Surrogate Recoveries
- Blank Summary and Data
- GC/MS Instrument Performance Check
- Target Compound Identification/Quantitation
- EPA/NIH Mass Spectral Library Search for TICs
- Quantitation Reports and Mass Spectral Data
- Initial and Continuing Calibration Data
- Internal Standard Areas and Retention Times

The above items were in compliance with USEPA QC criteria with the exception of the items discussed in the following text. The data have been validated according to the above procedures and qualified as described on the attached definitions list.

Deliverable Requirements

Although only data for polynuclear aromatic hydrocarbons (PAHs) were requested, a complete semivolatile organic data package has been submitted.

Case Narrative

The laboratory Case Narrative states that batch QC is being supplied because matrix spikes were not designated to be performed on any of the samples in this SDG. It should be noted that no matrix QC has been supplied with this SDG. No data have been qualified based upon this omission, however, because MS/MSD analysis was not requested for this SDG.

Surrogate Recoveries

Six (6) of the eight (8) surrogate compounds recovered outside of QC limits for SBLK77, the method blank associated with the samples in this SDG. No data have been qualified based upon these recoveries, however, because surrogate recoveries for each of the associated samples are within QC limits.. Furthermore, the elevated percent recoveries would indicate a potential high bias and the samples do not exhibit any semivolatile organic compounds.

Blank Summary and Data

Two (2) tentatively identified compounds (TICs) were detected in method blank SBLK77, including an aldol condensation product. Results for these TICs in the associated samples have been rejected and are considered unusable. Please note that this has no effect on the usability of the data for the target compounds reported.

Initial and Continuing Calibration Data

The percent difference (%D) between the average relative response factor (RRF) for the initial calibration and the RRF for the continuing calibration standard analyzed on 12/08/94 for the compounds benzo(k)fluoranthene (-31.8) and benzo(g,h,i)perylene (33.3) exceeded the QC limit of 25.0%D specified in the SOW. The compounds hexachlorocyclopentadiene (79.9), 3-nitroaniline (63.6), 4-nitroaniline (46.6), 3,3'-dichlorobenzidine (51.1) and di-n-octylphthalate (51.1) also exhibited percent differences which exceed 25%, but these compounds do not have a maximum %D specified in the SOW.

The percent difference (%D) between the average relative response factor (RRF) for the initial calibration and the RRF for the continuing calibration standard analyzed on 12/09/94 for the compound benzo(k)fluoranthene (-35.3) exceeded the QC limit of 25.0%D specified in the SOW. The compounds 4-chloroaniline (36.4), hexachlorocyclopentadiene (83.4), 3-nitroaniline (36.7), 4-nitroaniline (36.5) and di-n-octylphthalate (-44.4) also exhibited percent differences which exceed 25%, but these compounds do not have a maximum %D specified in the SOW.

In accordance with USEPA validation criteria, the results for those compounds with a %D greater than 25.0 associated with these continuing calibration standards have been flagged with a "V" and are considered estimated. Please note that estimated data are considered valid and usable and that these continuing calibrations are fully compliant and usable.

Summary

In summary, based on 192 sample data points, 21 of which were qualified as estimated, and none qualified as unusable, and since estimated data are considered valid and usable, the usability of this data package is 100%.

Anthony M Noce
Reviewed By

24 JANUARY 95
Date

E/ Terrenzoni
Approved By

1-24-95
Date

Semivolatile Organic Analytical Data

Skinner Landfill Site
West Chester, Ohio

Sampling Date: November 4, 1994
Remedial Design Investigation

Sample ID / Compound	SB5601	SB5602	SB5603
Phenol	350 U	350 U	350 U
bis(2-Chloroethyl)Ether	350 U	350 U	350 U
2-Chlorophenol	350 U	350 U	350 U
1,3-Dichlorobenzene	350 U	350 U	350 U
1,4-Dichlorobenzene	350 U	350 U	350 U
1,2-Dichlorobenzene	350 U	350 U	350 U
2-Methylphenol	350 U	350 U	350 U
2,2'-oxybis(1-Chloropropane)	350 U	350 U	350 U
4-Methylphenol	350 U	350 U	350 U
N-Nitroso-di-n-propylamine	350 U	350 U	350 U
Hexachloroethane	350 U	350 U	350 U
Nitrobenzene	350 U	350 U	350 U
Isophorone	350 U	350 U	350 U
2-Nitrophenol	350 U	350 U	350 U
2,4-Dimethylphenol	350 U	350 U	350 U
2,4-Dichlorophenol	350 U	350 U	350 U
1,2,4-Trichlorobenzene	350 U	350 U	350 U
Naphthalene	350 U	350 U	350 U
4-Chloroaniline	350 U	350 U	350 U
Hexachlorobutadiene	350 U	350 U	350 U
bis(2-Chloroethoxy)methane	350 U	350 U	350 U
4-Chloro-3-Methylphenol	350 U	350 U	350 U
2-Methylnaphthalene	350 U	350 U	350 U
Hexachlorocyclopentadiene	350 U	350 U	350 U
2,4,6-Trichlorophenol	350 U	350 U	350 U
2,4,5-Trichlorophenol	830 U	840 U	850 U
2-Chloronaphthalene	350 U	350 U	350 U
2-Nitroaniline	830 U	840 U	850 U
Dimethylphthalate	350 U	350 U	350 U
Acenaphthylene	350 U	350 U	350 U
2,6-Dinitrotoluene	350 U	350 U	350 U
3-Nitroaniline	830 U	840 U	850 U
Acenaphthene	350 U	350 U	350 U
2,4-Dinitrophenol	830 U	840 U	850 U
4-Nitrophenol	830 U	840 U	850 U
Dibenzofuran	350 U	350 U	350 U
2,4-Dinitrotoluene	350 U	350 U	350 U
Diethylphthalate	350 U	350 U	350 U
4-Chlorophenyl-phenylether	350 U	350 U	350 U
Fluorene	350 U	350 U	350 U

Semivolatile Organic Analytical Data

Skinner Landfill Site
West Chester, Ohio

Sampling Date: November 4, 1994
Remedial Design Investigation

Sample ID / Compound	SB5601	SB5602	SB5603
4-Nitroaniline	830 U	840 U	850 U
4,6-Dinitro-2-methylphenol	830 U	840 U	850 U
N-Nitrosodiphenylamine	350 U	350 U	350 U
4-Bromophenyl-phenylether	350 U	350 U	350 U
Hexachlorobenzene	350 U	350 U	350 U
Pentachlorophenol	830 U	840 U	850 U
Phenanthrene	350 U	350 U	350 U
Anthracene	350 U	350 U	350 U
Carbazole	350 U	350 U	350 U
Di-n-butylphthalate	350 U	350 U	350 U
Fluoranthene	350 U	350 U	350 U
Pyrene	350 U	350 U	350 U
Butylbenzylphthalate	350 U	350 U	350 U
3,3'-Dichlorobenzidine	350 U	350 U	350 U
Benzo(a)anthracene	350 U	350 U	350 U
Chrysene	350 U	350 U	350 U
bis(2-Ethylhexyl)phthalate	350 U	350 U	350 U
Di-n-octylphthalate	350 U	350 U	350 U
Benzo(b)fluoranthene	350 U	350 U	350 U
Benzo(k)fluoranthene	350 U	350 U	350 U
Benzo(a)pyrene	350 U	350 U	350 U
Indeno(1,2,3-cd)pyrene	350 U	350 U	350 U
Dibenz(a,h)anthracene	350 U	350 U	350 U
Benzo(g,h,i)perylene	350 U	350 U	350 U

All results expressed in ug/Kg.
Standard Organic Data Qualifiers have been applied.

PCB Data Validation Summary
Skinner Landfill Site
West Chester, Ohio
Analytical Laboratory: NYTEST Environmental, Inc.
Sample Delivery Group SKIN2

Analytical results for 25 soil samples with matrix QC, two (2) field duplicates and two (2) field blanks from the Skinner Landfill site were reviewed to evaluate the data quality. Data were assessed in accordance with the United States Environmental Protection Agency (USEPA) National Functional Guidelines for Organic Data Review (Draft 12/90, Revised 6/91) and the USEPA Region II document CLP Organics Data Review and Preliminary Review (SOP No. HW-6, Revision No. 8, January, 1992), where applicable. This validation pertains to the following samples collected by Rust Environment & Infrastructure (RUST) personnel on October 11, 12 and 14, 1994.

SK-SB50-01	SK-SB55-01 MSD	SK-SB58-03	SK-SB82-01
SK-SB50-02	SK-SB55-02	SK-SB59-01	SK-SB82-02
SK-SB50-03	SK-SB55-03	SK-SB80-01	SK-SB82-03
SK-SB51-01	SK-SB57-01	SK-SB80-02	SK-SBFD-01
SK-SB51-02	SK-SB57-02	SK-SB80-03	SK-SBFD-02
SK-SB51-03	SK-SB57-03	SK-SB81-01	SK-SBFB-01
SK-SB55-01	SK-SB58-01	SK-SB81-02	SK-SBFB-02
SK-SB55-01 MS	SK-SB58-02	SK-SB81-03	

The following items/criteria applicable to the samples listed above were reviewed:

- Deliverable Requirements
- Case Narrative
- Holding Times
- Surrogate Recoveries
- Matrix Spike/Matrix Spike Duplicate (MS/MSD) Results
- Method Blank Summary and Data
- Calibration and GC Performance
- Analyte Resolution Check
- Analytical Sequence
- Cleanup Efficiency
- PCB Identification
- Compound Quantitation and Reported Detection Limits
- Chromatogram Quality
- Field Duplicate Data

The above items were compliant with USEPA QC criteria with the exception of the items discussed in the following text. The data have been validated according to the above procedures and qualified as described on the attached definitions list.

Deliverable Requirements

As requested, only PCB results were reported for the samples in this SDG.

Surrogate Recoveries

The recoveries for the surrogate compounds tetrachloro-m-xylene (TCX) and decachlorobiphenyl (DCB) are summarized below:

Sample ID	TCX DB-608	TCX RTX-1701	DCB DB-608	DCB RTX-1701
PBLK51	68	74	109	108
SK-SBFB-01	64	70	50*	56*
SK-SBFB-02	40*	50*	64	64
PBLK22	32*	32*	64	64
SK-SB55-01	9*	0*	28*	16*
SK-SB55-01 MS	4*	0*	0*	0*
SK-SB55-01 MSD	4*	0*	0*	0*
SK-SB55-02	0*	0*	0*	0*
SK-SB55-03	0*	0*	0*	0*
PBLK54	0*	0*	42*	42*
SK-SB50-01	0*	0*	49*	48*
SK-SB50-02	17*	12*	78	81
SK-SB50-03	0*	7*	94	73
SK-SB51-01	8*	8*	51*	46*
SK-SB51-02	6*	0*	56*	46*
SK-SB51-03	0*	0*	47*	27*
SK-SB57-01	16*	11*	39*	35*
SK-SB57-03	16*	12*	46*	43*
SK-SB58-01	5*	8*	48*	46*
SK-SB58-02	8*	9*	39*	38*
SK-SB58-03	0*	8*	39*	35*
SK-SB59-01	8*	4*	57*	54*
SK-SB80-01	0*	0*	13*	13*
SK-SB80-03	6*	9*	24*	18*
SK-SB81-01	6*	0*	60	50*
SK-SB81-02	3*	0*	40*	50*
SK-SB81-03	4*	4*	52*	52*
SK-SB82-01	4*	0*	55*	55*
SK-SB82-02	17*	12*	93	74
SK-SB82-03	0*	0*	63	59*

** Values outside of advisory QC limits (60-150%).*

Sample ID	TCX DB-608	TCX RTX-1701	DCB DB-608	DCB RTX-1701
PBLK55	0*	0*	42*	42*
SK-SB57-02	16*	14*	56*	54*
SK-SB80-02	5*	4*	20*	11*
SK-SBFD-01	18*	14*	62	55*
SK-SBFD-02	46*	36*	111	91

** Values outside of advisory QC limits (60-150%).*

Please note that every sample in this SDG exhibits two or more low surrogate recoveries, and that the majority of samples exhibited extremely low (<10%) TCX recoveries on both analytical columns.

The results reported for the following samples have been rejected and are considered unusable in accordance with EPA data validation guidelines due to extremely low surrogate recoveries: SK-SB55-01, SK-SB55-01 MS, SK-SB55-01 MSD, SK-SB55-02, SK-SB55-03, SK-SB50-01, SK-SB50-03, SK-SB51-01, SK-SB51-02, SK-SB51-03, SK-SB58-01, SK-SB58-02, SK-SB58-03, SK-SB59-01, SK-SB80-01, SK-SB80-02, SK-SB80-03, SK-SB81-01, SK-SB81-02, SK-SB81-03, SK-SB82-01 and SK-SB82-03. The results reported for method blanks PBLK54 and PBLK55 have also been rejected and are considered unusable due to extremely low surrogate recoveries.

Each of the results for samples SK-SBFB-01, SK-SBFB-02, SK-SB50-02, SK-SB57-01, SK-SB57-02, SK-SB57-03, SK-SB82-02, SK-SBFD-01 and SK-SBFD-02 have been flagged with a "V" and are considered estimated with a potential low bias due to the low surrogate recoveries exhibited on each analytical column.

Matrix Spike/Matrix Spike Duplicate (MS/MSD) Results

As noted in the **Surrogate Recoveries** section of this Data Validation Summary, the MS/MSD results have been rejected and are considered unusable due to extremely low surrogate recoveries. The MS/MSD data indicate that none of the spike compounds added were recovered.

Method Blank Summary and Performance

As noted in the **Surrogate Recoveries** section of this Data Validation Summary, the results reported for method blanks PBLK54 and PBLK55 have been rejected and are considered unusable due to extremely low surrogate recoveries. Review of the data reported for method blanks PBLK22 and PBLK22, as well as the field blank data, indicate that additional qualification of the data is not required based upon the blank data.

Field Duplicate Data

Sample SK-SBFD-01 is a field duplicate of sample SK-SB81-01 and sample SK-SBFD-02 is a field duplicate of sample SK-SB50-03. As noted in the **Surrogate Recoveries** section of this Data Validation Summary, the sample results for SK-SB81-01 and SK-SB50-03 have been rejected due to extremely low surrogate recoveries. Therefore, no field duplicate data is available for this SDG. The data for samples SK-SBFD-01 and SK-SBFD-02 should be used in place of the data for samples SK-SB81-01 and SK-SB50-03, respectively.

Summary

In summary, based on 189 sample data points, 49 of which were qualified as estimated, and 140 qualified as unusable, and since estimated data are considered valid and usable, the usability of this package is 25.9%.

Anthony M. Noce — Reviewed By — 24 JANUARY 95 — Date

E/ Fahrenthold — Approved By — 1-24-95 — Date

PCB Analytical Data

Skinner Landfill Site
West Chester, Ohio

Sampling Dates: October 11, 12 and 14, 1994
Remedial Design Investigation

Compound	SB5001	SB5002	SB5003	SB5101	SB5102	SB5103	SB5501	SB5502	SB5503	SB5701
Aroclor-1016	R	37 UV	R	R	R	R	R	R	R	35 UV
Aroclor-1221	R	74 UV	R	R	R	R	R	R	R	71 UV
Aroclor-1232	R	37 UV	R	R	R	R	R	R	R	35 UV
Aroclor-1242	R	37 UV	R	R	R	R	R	R	R	35 UV
Aroclor-1248	R	37 UV	R	R	R	R	R	R	R	35 UV
Aroclor-1254	R	37 UV	R	R	R	R	R	R	R	35 UV
Aroclor-1260	R	37 UV	R	R	R	R	R	R	R	35 UV

Compound	SB5702	SB5703	SB5801	SB5802	SB5803	SB5901	SB8001	SB8002	SB8003	SB8101
Aroclor-1016	35 UV	35 UV	R	R	R	R	R	R	R	R
Aroclor-1221	71 UV	71 UV	R	R	R	R	R	R	R	R
Aroclor-1232	35 UV	35 UV	R	R	R	R	R	R	R	R
Aroclor-1242	35 UV	35 UV	R	R	R	R	R	R	R	R
Aroclor-1248	35 UV	35 UV	R	R	R	R	R	R	R	R
Aroclor-1254	35 UV	35 UV	R	R	R	R	R	R	R	R
Aroclor-1260	35 UV	35 UV	R	R	R	R	R	R	R	R

Compound	SB8102	SB8103	SB8201	SB8202	SB8203	SBFD01	SBFD02	SBFB01	SBFB02
Aroclor-1016	R	R	R	36 UV	R	39 UV	38 UV	1 UV	1 UV
Aroclor-1221	R	R	R	74 UV	R	80 UV	78 UV	2 UV	2 UV
Aroclor-1232	R	R	R	36 UV	R	39 UV	38 UV	1 UV	1 UV
Aroclor-1242	R	R	R	36 UV	R	39 UV	38 UV	1 UV	1 UV
Aroclor-1248	R	R	R	36 UV	R	39 UV	38 UV	1 UV	1 UV
Aroclor-1254	R	R	R	36 UV	R	39 UV	38 UV	1 UV	1 UV
Aroclor-1260	R	R	R	36 UV	R	39 UV	38 UV	1 UV	1 UV

All results expressed in ug/Kg, except for SK-SBFB-03 and SK-SBFB-04 which are expressed in ug/L.
Standard Organic Data Qualifiers have been applied.
Samples SK-SBFB-01 and SK-SBFB-02 are field blanks.
Sample SK-SBFD-01 is a field duplicate of sample SK-SB81-01.
Sample SK-SBFD-02 is a field duplicate of sample SK-SB50-03.

PCB Data Validation Summary
Skinner Landfill Site
West Chester, Ohio
Analytical Laboratory: NYTEST Environmental, Inc.
Sample Delivery Group SKIN3

Analytical results for nine (9) soil samples with matrix QC, two (2) field duplicates and two (2) field blanks from the Skinner Landfill site were reviewed to evaluate the data quality. Data were assessed in accordance with the United States Environmental Protection Agency (USEPA) **National Functional Guidelines for Organic Data Review** (Draft 12/90, Revised 6/91) and the USEPA Region II document **CLP Organics Data Review and Preliminary Review** (SOP No. HW-6, Revision No. 8, January, 1992), where applicable. This validation pertains to the following samples collected by Rust Environment & Infrastructure (RUST) personnel on October 13, 1994.

SK-SB52-01	**SK-SB54-01 MSD**
SK-SB52-02	**SK-SB54-02**
SK-SB52-03	**SK-SB54-03**
SK-SB53-01	**SK-SBFD-03**
SK-SB53-02	**SK-SBFD-04**
SK-SB53-03	**SK-SBFB-03**
SK-SB54-01	**SK-SBFB-04**
SK-SB54-01 MS	

The following items/criteria applicable to the samples listed above were reviewed:

- Deliverable Requirements
- Case Narrative
- Holding Times
- Surrogate Recoveries
- Matrix Spike/Matrix Spike Duplicate (MS/MSD) Results
- Method Blank Summary and Data
- Calibration and GC Performance
- Analyte Resolution Check
- Analytical Sequence
- Cleanup Efficiency
- PCB Identification
- Compound Quantitation and Reported Detection Limits
- Chromatogram Quality
- Field Duplicate Data

The above items were compliant with USEPA QC criteria with the exception of the items discussed in the following text. The data have been validated according to the above procedures and qualified as described on the attached definitions list.

Deliverable Requirements

As requested, only PCB results were reported for the samples in this SDG.

Surrogate Recoveries

The recoveries for the surrogate compounds tetrachloro-m-xylene (TCX) and decachlorobiphenyl (DCB) are summarized below:

Sample ID	TCX DB-608	TCX DB-1701	DCB DB-608	DCB DB-1701
PBLK25	32*	36*	37*	40*
SK-SBFB-03	27*	29*	19*	20*
SK-SBFB-04	41*	45*	34*	36*
PBLK01	63	63	111	110
SK-SB52-01	93	99	268*	164*
SK-SB52-02	91	97	588*	127
SK-SB52-03	36*	37*	75	48*
SK-SB53-01	104	98	1600*	0D
SK-SB53-02	98	90	0D	64
SK-SB53-03	90	90	222*	83
SK-SB54-01	74	78	112	106
SK-SB54-01 MS	60	62	104	96
SK-SB54-01 MSD	91	92	318*	92
SK-SB54-02	74	76	652*	133
SK-SB54-03	81	84	153*	90
SK-SBFD-03	154*	145	234*	150
SK-SBFD-04	85	85	175*	78

** Values outside of advisory QC limits (60-150%).*
D Indicates that the surrogate has been diluted out.

Each of the results for samples SK-SBFB-03, SK-SBFB-04 and SK-SB52-03 have been flagged with a "V" and are considered estimated with a potential low bias due to the low surrogate recoveries exhibited on each analytical column.

Matrix Spike/Matrix Spike Duplicate (MS/MSD) Results

Although the MS and MSD percent recoveries met all QC requirements, the relative percent difference (RPD) value between the MS and MSD Aroclor 1016 concentrations exceeded QC criteria. The MS/MSD recoveries and RPD values are summarized below:

Compound	MS %R	MSD %R	RPD	QC Limits RPD	QC Limits %R
Aroclor 1016	78	100	25*	23	10-230
Aroclor 1260	92	98	6	28	10-195

** Values outside of advisory QC limits (60-150%).*

No data have been qualified based upon the MS/MSD results, however, because no action is taken on MS/MSD data alone and other data does not indicate the need for further qualification of the data.

Calibration and GC Performance

The percent relative standard deviation (%RSD) for the compound 4,4'DDT in the initial calibration run on 11/24/94 for the analytical column DB-1701 was 20.5%, which exceeds the maximum %RSD of 20.0 specified in the Statement of Work (SOW). No data have been qualified based upon this non-conformance, however, because the SOW allows up to two (2) target compounds to have a %RSD greater than 20.0% but less than 30.0%. Furthermore, 20.5% rounds to 20% under the EPA rounding rules.

PCB Identification Summary

Aroclor 1254 was reported in samples SK-SB53-02, SK-SB53-03, SK-SB54-01, SK-SB54-02 and SK-SB54-03, with each sample exhibiting a percent difference (%D) between the value reported on the two analytical columns greater than 25%. These percent differences are summarized below. Each of the results with a %D between 25 and 50 has been flagged with a "V" and is considered estimated. Each of the results with a %D greater than 50% has been flagged "VN" and is considered estimated with presumptive evidence for identification.

	Aroclor 1254 Mean Concentration		
Sample ID	DB-608	DB-1701	%D
SK-SB53-02	52	120	130.8
SK-SB53-03	35	63	80.0
SK-SB54-01	92	160	73.9
SK-SB54-02	14	20	42.9
SK-SB54-03	24	44	83.3

Field Duplicate Data

Sample SK-SBFD-03 is a field duplicate of sample SK-SB52-02 and sample SK-SBFD-04 is a field duplicate of sample SK-SB53-03. No PCBs were detected in either sample or its associated field duplicate. The field duplicate data reported is indicative of acceptable sampling and analytical precision.

Summary

In summary, based on 77 sample data points, twelve (12) of which were qualified as estimated, and none qualified as unusable, and since estimated data are considered valid and usable, the usability of this package is 100%.

Anthony M. Noce — Reviewed By — 24 JANUARY 95 — Date

/s/ Ed Fehrenbacher — Approved By — 1-24-95 — Date

PCB Semivolatile Organic

Skinner Landfill Site
West Chester, Ohio

Sampling Date: October 13, 1994
Remedial Design Investigation

Sample ID / Compound	SB5201	SB5202	SB5203	SB5301	SB5302	SB5303	SB5401
Aroclor-1016	37 U	76 U	39 UV	350 U	160 U	190 U	80 U
Aroclor-1221	75 U	150 U	80 UV	710 U	320 U	390 U	160 U
Aroclor-1232	37 U	76 U	39 UV	350 U	160 U	190 U	80 U
Aroclor-1242	37 U	76 U	39 UV	350 U	160 U	190 U	80 U
Aroclor-1248	37 U	76 U	39 UV	350 U	160 U	190 U	80 U
Aroclor-1254	**18 J**	76 U	39 UV	350 U	**52 JPVN**	**35 JPVN**	**91 PVN**
Aroclor-1260	37 U	76 U	39 UV	350 U	160 U	190 U	80 U

Sample ID / Compound	SB5402	SB5403	SBFD03	SBFD04	SBFB03	SBFB04
Aroclor-1016	41 U	41 U	120 U	150 U	1 UV	1 UV
Aroclor-1221	83 U	84 U	240 U	310 U	2 UV	2 UV
Aroclor-1232	41 U	41 U	120 U	150 U	1 UV	1 UV
Aroclor-1242	41 U	41 U	120 U	150 U	1 UV	1 UV
Aroclor-1248	41 U	41 U	120 U	150 U	1 UV	1 UV
Aroclor-1254	**13 JPV**	**24 JPVN**	120 U	150 U	1 UV	1 UV
Aroclor-1260	41 U	41 U	120 U	150 U	1 UV	1 UV

All results expressed in ug/Kg, except for SK-SBFB-03 and SK-SBFB-04 which are expressed in ug/L.
Standard Organic Data Qualifiers have been applied.
Samples SK-SBFB-03 and SK-SBFB-04 are field blanks.
Sample SK-SBFD-01 is a field duplicate of sample SK-SB81-01.
Sample SK-SBFD-02 is a field duplicate of sample SK-SB50-03.

PCB Data Validation Summary
Skinner Landfill Site
West Chester, Ohio
Analytical Laboratory: NYTEST Environmental, Inc.
Sample Delivery Group SKIN5

Analytical results for three (3) soil samples from the Skinner Landfill site were reviewed to evaluate the data quality. Data were assessed in accordance with the United States Environmental Protection Agency (USEPA) **National Functional Guidelines for Organic Data Review** (Draft 12/90, Revised 6/91) and the USEPA Region II document **CLP Organics Data Review and Preliminary Review** (SOP No. HW-6, Revision No. 8, January, 1992), where applicable. This validation pertains to the following samples collected by Rust Environment & Infrastructure (RUST) personnel on November 4, 1994.

SK-SB56-01
SK-SB56-02
SK-SB56-03

The following items/criteria applicable to the samples listed above were reviewed:

- Deliverable Requirements
- Case Narrative
- Holding Times
- Surrogate Recoveries
- Method Blank Summary and Data
- Calibration and GC Performance
- Analyte Resolution Check
- Analytical Sequence
- Cleanup Efficiency
- PCB Identification
- Compound Quantitation and Reported Detection Limits
- Chromatogram Quality

The above items were compliant with USEPA QC criteria with the exception of the items discussed in the following text. The data have been validated according to the above procedures and qualified as described on the attached definitions list.

Deliverable Requirements

As requested, only PCB results were reported for the samples in this SDG.

Summary

No reasons were found during data validation to qualify any of the results reported. In summary, based on 21 sample data points, none of which were qualified as estimated, and none qualified as unusable, the usability of this package is 100%.

Cinthony M. Noce — Reviewed By — 24 JANUARY 95 — Date

Ed Fuhrmann — Approved By — 1-24-95 — Date

PCB Analytical Data

Skinner Landfill Site
West Chester, Ohio

Sampling Date: November 4, 1995
Remedial Design Investigation

Sample ID Compound	SB5601	SB5602	SB5603
Aroclor-1016	34 U	35 U	35 U
Aroclor-1221	70 U	71 U	71 U
Aroclor-1232	34 U	35 U	35 U
Aroclor-1242	34 U	35 U	35 U
Aroclor-1248	34 U	35 U	35 U
Aroclor-1254	34 U	35 U	35 U
Aroclor-1260	34 U	35 U	35 U

All results expressed in ug/Kg.
Standard Organic Data Qualifiers have been applied.

Inorganic Data Validation Summary (Lead Only)
Skinner Landfill Site
West Chester, Ohio
Analytical Laboratory: NYTEST Environmental, Inc.
Sample Delivery Group SKIN2

Analytical results for 25 soil samples with matrix QC, two (2) field duplicates and two (2) field blanks from the Skinner Landfill site were reviewed to evaluate the data quality. Data were assessed in accordance with the United States Environmental Protection Agency (USEPA) **Laboratory Data Validation Functional Guidelines for Evaluating Inorganics Analysis** (October 1987 Revision) and the USEPA Region II **Checklist for Evaluation of Metals Data for the Contract Laboratory Program, Appendix A.1**, where applicable. This validation pertains to the following samples collected by Rust Environment & Infrastructure (RUST) personnel on October 11, 12 and 14, 1994.

SK-SB50-01	**SK-SB55-01 Spk**	**SK-SB58-03**	**SK-SB82-01**
SK-SB50-02	**SK-SB55-02**	**SK-SB59-01**	**SK-SB82-02**
SK-SB50-03	**SK-SB55-03**	**SK-SB80-01**	**SK-SB82-03**
SK-SB51-01	**SK-SB57-01**	**SK-SB80-02**	**SK-SBFD-01**
SK-SB51-02	**SK-SB57-02**	**SK-SB80-03**	**SK-SBFD-02**
SK-SB51-03	**SK-SB57-03**	**SK-SB81-01**	**SK-SBFB-01**
SK-SB55-01	**SK-SB58-01**	**SK-SB81-02**	**SK-SBFB-02**
SK-SB55-01 Dup	**SK-SB58-02**	**SK-SB81-03**	

The following items/criteria applicable to the samples listed above were reviewed:

- Deliverable Requirements
- Case Narrative
- Holding Times and Sample Preparation
- Initial and Continuing Calibration Data
- CRDL Standards for AA and ICP
- Instrument and Preparation Blank Summary and Data
- ICP Interference Check Sample
- Spiked Sample Recovery Data
- Laboratory Duplicate Data
- Laboratory Control Samples (LCS)
- ICP Serial Dilution Data
- Graphite Furnace Atomic Absorption (GFAA) QC Analysis
- Method of Standard Addition (MSA) Results
- Verification of Instrument Parameters
- Field Duplicate Data

The above items were in compliance with USEPA QC criteria with the exception of the items discussed in the following text. The data have been validated according to the above procedures and qualified as described on the attached definitions list.

Deliverable Requirements

Please note that this Data Validation Summary covers two (2) separate data packages submitted by the laboratory and that these two data packages contain all of the data for a single SDG. As requested, only lead results were reported for the samples in this SDG.

Please note that the laboratory incorrectly reported sample SB5901 as SB5909. The validator has corrected this minor misidentification where necessary.

It should also be noted that the laboratory did not report matrix QC data analyzed by graphite furnace atomic absorption spectroscopy. No data has been qualified based upon this nonconformance, however, because the elevated lead levels reported in the sample chosen for duplicate and spike analysis (SK-SB55-01) preclude the requirement for spike recovery and would require a large sample dilution.

CRDL Standard for AA and ICP

A CRDL standard must exhibit a percent recovery between 80 and 120 to be considered within QC limits. The final CRDL standard for ICP exhibited an elevated percent recovery for lead (141.2%). No results have been qualified based upon this nonconformance, however, because none of the associated lead results are within the affected range (true value +/- 2 X IDL).

Spiked Sample Recovery Data

The matrix spike recovery for lead was outside of QC limits (75-125%). The lead recovery was reported as -232.2%. No data have been qualified based upon this nonconformance, however, because the lead concentration in the sample is greater than four (4) times the spike added.

ICP Serial Dilution Data

ICP Serial Dilution analysis was performed on sample SK-SB81-01. The lead result for sample SK-SB81-01 is greater than ten (10) times the instrument detection limit (IDL) and the percent difference for the serial dilution analysis is 15.9.

ICP Serial Dilution analysis was also performed on sample SK-SB55-01. The lead result for sample SK-SB55-01 is greater than ten (10) times the IDL and the percent difference for the serial dilution analysis is 12.8.

In accordance with EPA data validation criteria, the associated lead results have been flagged with a "V" and is considered estimated.

Field Duplicate Analysis

The relative percent difference (RPD) between the lead result for sample SK-SB81-01 and its field duplicate, sample SK-SBFD-01, is 76.6. The RPD between the lead result for sample SK-SB50-03 and its field duplicate, sample SK-SBFD-02, is 121.9.

Although there are no established QC limits for field duplicate RPD data, RUST considers RPD values of 40% or less an indication of acceptable sampling and analytical precision. The lead results for samples SK-SB50-03, SK-SB81-01, SK-SBFD-01 and SK-SBFD-02 have been flagged with a "V" and are considered estimated due to the elevated RPD values exhibited.

Summary

In summary, based on 27 sample data points, five (5) of which were qualified as estimated, and none qualified as unusable, and since estimated data are considered valid and usable, the usability of this package is 100%.

Anthony M. Doce — Reviewed By — 18 JANUARY 95 — Date

Ed Fehrenbach — Approved By — 1-22-94 — Date

Inorganic Analytical Data (Lead Only)

Skinner Landfill Site
West Chester, Ohio

Sampling Dates: October 11, 12 and 14, 1994
Remedial Design Investigation

Sample ID	Lead Result	
SK-SBFB-01	ND at 3 ug/L	
SK-SBFB-02	ND at 3 ug/L	
SK-SBFD-01	40.8 mg/Kg	V
SK-SBFD-02	13.4 mg/Kg	V
SK-SB50-01	25.7 mg/Kg	
SK-SB50-02	31.9 mg/Kg	
SK-SB50-03	55.2 mg/Kg	V
SK-SB51-01	16.1 mg/Kg	
SK-SB51-02	30.5 mg/Kg	
SK-SB51-03	18.8 mg/Kg	
SK-SB55-01	845 mg/Kg	
SK-SB55-02	57.5 mg/Kg	
SK-SB55-03	366 mg/Kg	V
SK-SB57-01	5.9 mg/Kg	
SK-SB57-02	6.8 mg/Kg	
SK-SB57-03	6.7 mg/Kg	
SK-SB58-01	13.4 mg/Kg	
SK-SB58-02	6.5 mg/Kg	
SK-SB58-03	9 mg/Kg	
SK-SB5909	7.4 mg/Kg	
SK-SB80-01	47.4 mg/Kg	
SK-SB80-02	51.3 mg/Kg	
SK-SB80-03	42.3 mg/Kg	
SK-SB81-01	91.5 mg/Kg	V
SK-SB81-02	31.9 mg/Kg	
SK-SB81-03	30.2 mg/Kg	
SK-SB82-01	71.9 mg/Kg	
SK-SB82-02	109 mg/Kg	
SK-SB82-03	72.9 mg/Kg	

Notes:

ND indicates Not Detected.

V indicates that the result reported is considered estimated due to variance from quality control criteria.

Samples SK-SBFB-01 and SK-SBFB-02 are field blanks.

Sample SK-SBFD-01 is a field duplicate of sample SK-SB81-01.

Sample SK-SBFD-02 is a field duplicate of sample SK-SB50-03.

Inorganic Data Validation Summary (Lead Only)
Skinner Landfill Site
West Chester, Ohio
Analytical Laboratory: NYTEST Environmental, Inc.
Sample Delivery Group SKIN3

Analytical results for nine (9) soil samples, two (2) field duplicates and two (2) field blanks from the Skinner Landfill site were reviewed to evaluate the data quality. Data were assessed in accordance with the United States Environmental Protection Agency (USEPA) **Laboratory Data Validation Functional Guidelines for Evaluating Inorganics Analysis** (October 1987 Revision) and the USEPA Region II **Checklist for Evaluation of Metals Data for the Contract Laboratory Program, Appendix A.1**, where applicable. This validation pertains to the following samples collected by Rust Environment & Infrastructure (RUST) personnel on October 13, 1994.

SK-SB52-01	**SK-SB54-01 Spk**
SK-SB52-02	**SK-SB54-02**
SK-SB52-03	**SK-SB54-03**
SK-SB53-01	**SK-SBFD-03**
SK-SB53-02	**SK-SBFD-04**
SK-SB53-03	**SK-SBFB-03**
SK-SB54-01	**SK-SBFB-04**
SK-SB54-01 Dup	

The following items/criteria applicable to the samples listed above were reviewed:

- Deliverable Requirements
- Case Narrative
- Holding Times and Sample Preparation
- Initial and Continuing Calibration Data
- CRDL Standards for AA and ICP
- Instrument and Preparation Blank Summary and Data
- ICP Interference Check Sample
- Spiked Sample Recovery Data
- Laboratory Duplicate Data
- Laboratory Control Samples (LCS)
- ICP Serial Dilution Data
- Graphite Furnace Atomic Absorption (GFAA) QC Analysis
- Method of Standard Addition (MSA) Results
- Verification of Instrument Parameters
- Field Duplicate Data

The above items were in compliance with USEPA QC criteria with the exception of the items discussed in the following text. The data have been validated according to the above procedures and qualified as described on the attached definitions list.

Deliverable Requirements

As requested, only lead results were reported for the samples in this SDG.

Please note that the laboratory did not report the data for the preparation blank and laboratory control sample (LCS) analyzed by graphite furnace atomic absorption spectroscopy. No data has been qualified based upon this nonconformance, however, because the prep blank and LCS data met all QC criteria and this data has been added to the appropriate forms by the validator.

CRDL Standard for AA and ICP

A CRDL standard must exhibit a percent recovery between 80 and 120 to be considered within QC limits. The final CRDL standard for ICP analyzed on 11/01/94 exhibited an elevated percent recovery for lead (143.4%). The final CRDL standard for ICP analyzed on 11/02/94 also exhibited an elevated percent recovery for lead (120.8%). No results have been qualified based upon these nonconformances, however, because none of the associated lead results are within the affected range (true value +/- 2 X IDL).

Spiked Sample Recovery Data

The matrix spike recovery for lead was outside of QC limits (75-125%). The lead recovery was reported as 7.0%. No data have been qualified based upon this nonconformance, however, because the lead concentration in the sample is greater than four (4) times the spike added.

Field Duplicate Analysis

The relative percent difference (RPD) between the lead result for sample SK-SB52-02 and its field duplicate, sample SK-SBFD-03, is 0.8. The RPD between the lead result for sample SK-SB53-03 and its field duplicate, sample SK-SBFD-04, is 123.6.

Although there are no established QC limits for field duplicate RPD data, RUST considers RPD values of 40% or less an indication of acceptable sampling and analytical precision. The lead results for samples SK-SB53-03 and SK-SBFD-04 have been flagged with a "V" and are considered estimated due to the elevated RPD value exhibited.

Summary

In summary, based on eleven (11) sample data points, two (2) of which were qualified as estimated, and none qualified as unusable, and since estimated data are considered valid and usable, the usability of this package is 100%.

Anthony M. Doce — Reviewed By — 18 JANUARY 1995 — Date

E.J. Fabrizio — Approved By — 1-22-95 — Date

Inorganic Analytical Data (Lead Only)

Skinner Landfill Site
West Chester, Ohio

Sampling Date: October 13, 1994
Remedial Design Investigation

Sample ID	Lead Result	
SK-SBFB-03	ND at 3 ug/L	
SK-SBFB-04	ND at 3 ug/L	
SK-SBFD-03	37.3 mg/Kg	
SK-SBFD-04	192 mg/Kg	V
SK-SB52-01	22.7 mg/Kg	
SK-SB52-02	37 mg/Kg	
SK-SB52-03	30.6 mg/Kg	
SK-SB53-01	13.3 mg/Kg	
SK-SB53-02	481 mg/Kg	
SK-SB53-03	45.3 mg/Kg	V
SK-SB54-01	24 mg/Kg	
SK-SB54-02	20.1 mg/Kg	
SK-SB54-03	17.6 mg/Kg	

Notes:

ND indicates Not Detected.

V indicates that the result reported is considered estimated due to variance from quality control criteria.

Samples SK-SBFB-03 and SK-SBFB-04 are field blanks.

Sample SK-SBFD-03 is a field duplicate of sample SK-SB52-02.

Sample SK-SBFD-04 is a field duplicate of sample SK-SB53-03.

Inorganic Data Validation Summary (Lead Only)
Skinner Landfill Site
West Chester, Ohio
Analytical Laboratory: NYTEST Environmental, Inc.
Sample Delivery Group SKIN5

Analytical results for three (3) soil samples from the Skinner Landfill site were reviewed to evaluate the data quality. Data were assessed in accordance with the United States Environmental Protection Agency (USEPA) **Laboratory Data Validation Functional Guidelines for Evaluating Inorganics Analysis** (October 1987 Revision) and the USEPA Region II **Checklist for Evaluation of Metals Data for the Contract Laboratory Program, Appendix A.1**, where applicable. This validation pertains to the following samples collected by Rust Environment & Infrastructure (RUST) personnel on November 4, 1994.

SK-SB56-01
SK-SB56-02
SK-SB56-03

The following items/criteria applicable to the samples listed above were reviewed:

- Deliverable Requirements
- Case Narrative
- Holding Times and Sample Preparation
- Initial and Continuing Calibration Data
- CRDL Standards for AA
- Instrument and Preparation Blank Summary and Data
- Laboratory Control Samples (LCS)
- Graphite Furnace Atomic Absorption (GFAA) QC Analysis
- Method of Standard Addition (MSA) Results
- Verification of Instrument Parameters

The above items were in compliance with USEPA QC criteria with the exception of the items discussed in the following text. The data have been validated according to the above procedures and qualified as described on the attached definitions list.

Deliverable Requirements

As requested, only lead results were reported for the samples in this SDG.

Please note that the raw data originally submitted by the laboratory was not legible due to extremely poor copy quality. A new copy of this data was submitted upon request.

It should also be noted that the CRDL standard reported for the AA found value was incorrect. This error was corrected during validation and does not affect the quality of the data reported.

Summary

No reasons were found during data validation to qualify any of the results reported. In summary, based on three (3) sample data points, none of which were qualified as estimated, and none qualified as unusable, the usability of this package is 100%.

Anthony M. Noce — Reviewed By — 18 JANUARY 95 — Date

Carl Fiksdal — Approved By — 1-22-95 — Date

Inorganic Analytical Data (Lead Only)

Skinner Landfill Site
West Chester, Ohio

Sampling Date: November 4, 1994
Remedial Design Investigation

Sample ID	Lead Result
SK-SB56-01	8 mg/Kg
SK-SB56-02	7.2 mg/Kg
SK-SB56-03	5.8 mg/Kg

Volatile Organic Data Validation Summary
Skinner Landfill Site
West Chester, Ohio
Analytical Laboratory: NYTEST Environmental, Inc.
Sample Delivery Group 22661

Analytical results for two (2) soil samples with matrix QC, one (1) field duplicate, one (1) field blank and one (1) trip blank from the Skinner Landfill site were reviewed to evaluate the data quality. Data were assessed in accordance with the United States Environmental Protection Agency (USEPA) **National Functional Guidelines for Organic Data Review** (Draft 12/90, Revised 6/91) and the USEPA Region II document **CLP Organics Data Review and Preliminary Review** (SOP No. HW-6, Revision No. 8, January, 1992), where applicable. This validation pertains to the following samples collected by Rust Environment & Infrastructure (RUST) personnel on December 1, 1994.

SKNC-01
SKNC-02
SKNC-02 MS
SKNC-02 MSD
SKNC-FD
SKNC-FB
Trip Blank

The following items/criteria applicable to the samples listed above were reviewed:

- Deliverable Requirements
- Case Narrative
- Holding Times
- System Monitoring Compound (SMC) Recoveries
- Matrix Spike/Matrix Spike Duplicate (MS/MSD) Results
- Blank Summary and Data
- GC/MS Instrument Performance Check
- Target Compound Identification/Quantitation
- EPA/NIH Mass Spectral Library Search for TICs
- Quantitation Reports and Mass Spectral Data
- Initial and Continuing Calibration Data
- Internal Standard Areas and Retention Times
- Field Duplicate Data

The above items were in compliance with USEPA laboratory QC criteria with the exception of the items discussed in the following text. The data have been validated according to the above procedures and qualified as described on the attached definitions list.

Matrix Spike/Matrix Spike Duplicate (MS/MSD) Results

Sample SKNC-02 was submitted for MS/MSD analysis. Four (4) out of ten (10) spike recoveries were outside of QC limits, although the relative percent difference (RPD) between the MS and MSD recoveries met all QC limits. Non-compliant low level soil MS/MSD data is summarized below.

Non-Compliant MS/MSD Data

Compound	MS %R	MSD %R	RPD	QC Limits RPD	QC Limits %R
Toluene	159*	142*	11	21	59-139
Chlorobenzene	145*	136*	6	21	60-133

** Indicates values outside of QC limits.*

No data have been qualified based upon this data, however, because MS/MSD data is only advisory and other data does not indicate the need for qualification of the results. Furthermore, both the toluene and chlorobenzene recoveries are indicative of a potential high bias and neither toluene nor chlorobenzene were reported in sample SKNC-02.

Method Blank Summary and Data

Methylene chloride, a common laboratory contaminant, was detected in method blank VBLKP97, the trip blank and the field blank (sample SKNC-FB) associated with this SDG. In accordance with EPA validation criteria, sample methylene chloride results less than ten (10) times the associated blank value have been reported as non-detect at the contract required quantitation limit (CRQL).

Acetone, another common laboratory contaminant, was detected in sample SKNC-02. Although acetone was not detected in any of the associated blanks, this result has been flagged with an "S" and is suspected to be laboratory derived and not site related.

Initial and Continuing Calibration Data

The relative response factor (RRF) for the 10 ug/L and 50 ug/L standards for 1,1,2,2-tetrachloroethane in the initial calibration analyzed on 11/15/94 were below the 0.500 minimum RRF specified in the Statement of Work (SOW). The RRF for the 10 ug/L standard was 0.447 and the RRF50 was 0.441. No data have been qualified based upon these nonconformances, however, because the average RRF for 1,1,2,2-tetrachloroethane is 0.534 and because the SOW allows for up to two (2) RRF to fall below the specified QC limits. Therefore, this initial calibration is considered to be fully compliant and usable.

The percent relative standard deviation (%RSD) for the compound methylene chloride in the initial calibration analyzed on 11/15/94 is 37.4, which exceeds the USEPA technical criteria of 30.0%RSD. Each of the positive results reported for methylene chloride and associated with this initial calibration have been flagged with a "V" and are considered estimated.

The RRF for 1,1,2,2-tetrachloroethane in the continuing calibration standard analyzed on 12/06/94 was below the 0.500 minimum RRF specified in the SOW. The RRF for this continuing calibration standard was 0.419. No data have been qualified based upon this nonconformance, however, because the SOW allows for up to two (2) RRF to fall below the

specified QC limits. Therefore, this continuing calibration is considered to be fully compliant and usable.

The calibration check standard on 12/06/94 contained seven (7) compounds whose percent difference (%D) between the average RRF from the initial calibration and the RRF for the continuing calibration exceeded the USEPA technical criteria of 25.0%D. The chloroethane (52.4%D), methylene chloride (41.0%D), acetone (29.8%D), carbon disulfide (25.1%D), 2-butanone (25.3%D), 4-methyl-2-pentanone (26.6%D) and 2-hexanone (27.1%D) results associated with this continuing calibration standard have been flagged with a "V" and are considered estimated.

The calibration check standard on 12/05/94 contained three (3) compounds whose percent difference (%D) between the average RRF from the initial calibration and the RRF for the continuing calibration exceeded the USEPA technical criteria of 25.0%D. The chloromethane (25.6%D), vinyl chloride (27.1%D) and carbon disulfide (31.4%D) results associated with this continuing calibration standard have been flagged with a "V" and are considered estimated.

Field Duplicate Data

Sample SKNC-FD is a field duplicate of sample SKNC-02. With the exception of the acetone result reported for sample SKNC-02, which has been discussed above, no volatile organic compounds were detected in either sample SKNC-02 or its field duplicate. Therefore, the field duplicate data is indicative of acceptable sampling and analytical precision.

Summary

In summary, based on 99 sample data points, nine (9) of which was qualified as estimated, and none qualified as unusable, and since estimated data are considered valid and usable, the usability of this package is 100%.

Anthony M. Noce — Reviewed By — 25 JANUARY 95 — Date

Approved By — 1-27-95 — Date

Volatile Organic Analytical Data

Skinner Landfill Site
West Chester, Ohio

Sampling Date: December 1, 1994
Remedial Design Investigation

Sample ID / Compound	SKNC-01	SKNC-02	SKNC-FD	SKNC-FB	TRPBLK
Chloromethane	12 UV	14 UV	14 UV	10 U	10 U
Bromomethane	12 U	14 U	14 U	10 U	10 U
Vinyl Chloride	12 UV	14 UV	14 UV	10 U	10 U
Chloroethane	12 U	14 U	14 U	10 UV	10 UV
Methylene Chloride	12 U	14 U	14 U	**6 JBV**	**9 JBV**
Acetone	12 U	**3 JS**	14 U	10 UV	10 UV
Carbon Disulfide	12 UV	14 UV	14 UV	10 UV	10 UV
1,1-Dichloroethene	12 U	14 U	14 U	10 U	10 U
1,1-Dichloroethane	12 U	14 U	14 U	10 U	10 U
1,2-Dichloroethene (total)	12 U	14 U	14 U	10 U	10 U
Chloroform	12 U	14 U	14 U	10 U	10 U
1,2-Dichloroethane	12 U	14 U	14 U	10 U	10 U
2-Butanone	12 U	14 U	14 U	10 UV	10 UV
1,1,1-Trichloroethane	12 U	14 U	14 U	10 U	10 U
Carbon Tetrachloride	12 U	14 U	14 U	10 U	10 U
Bromodichloromethane	12 U	14 U	14 U	10 U	10 U
1,2-Dichloropropane	12 U	14 U	14 U	10 U	10 U
cis-1,3-Dichloropropene	12 U	14 U	14 U	10 U	10 U
Trichloroethene	12 U	14 U	14 U	10 U	10 U
Dibromochloromethane	12 U	14 U	14 U	10 U	10 U
1,1,2-Trichloroethane	12 U	14 U	14 U	10 U	10 U
Benzene	12 U	14 U	14 U	10 U	10 U
trans-1,3-Dichloropropene	12 U	14 U	14 U	10 U	10 U
Bromoform	12 U	14 U	14 U	10 U	10 U
4-Methyl-2-Pentanone	12 U	14 U	14 U	10 UV	10 UV
2-Hexanone	12 U	14 U	14 U	10 UV	10 UV
Tetrachloroethene	12 U	14 U	14 U	10 U	10 U
1,1,2,2-Tetrachloroethane	12 U	14 U	14 U	10 U	10 U
Toluene	**7 J**	14 U	14 U	10 U	10 U
Chlorobenzene	12 U	14 U	14 U	10 U	10 U
Ethylbenzene	12 U	14 U	14 U	10 U	10 U
Styrene	12 U	14 U	14 U	10 U	10 U
Xylene (total)	12 U	14 U	14 U	10 U	10 U

All results expressed in ug/Kg, except for SKNC-FB which are expressed in ug/L.
Standard Organic Data Qualifiers have been used.
Sample SKNC-FD is a field duplicate of sample SKNC-02.
Sample SKNC-FB is a field blank.

Semivolatile Organic Data Validation Summary
Skinner Landfill Site
West Chester, Ohio
Analytical Laboratory: NYTEST Environmental, Inc.
Sample Delivery Group 22661

Analytical results for two (2) soil samples with matrix QC, one (1) field duplicate and one (1) field blank from the Skinner Landfill site were reviewed to evaluate the data quality. Data were assessed in accordance with the United States Environmental Protection Agency (USEPA) **National Functional Guidelines for Organic Data Review** (Draft 12/90, Revised 6/91) and the USEPA Region II document **CLP Organics Data Review and Preliminary Review** (SOP No. HW-6, Revision No. 8, January, 1992), where applicable. This validation pertains to the following samples collected by Rust Environment & Infrastructure (RUST) personnel on December 1, 1994.

SKNC-01
SKNC-02
SKNC-02 MS
SKNC-02 MSD
SKNC-FD
SKNC-FB

The following items/criteria applicable to the samples listed above were reviewed:

- Deliverable Requirements
- Case Narrative
- Holding Times
- Surrogate Recoveries
- Matrix Spike/Matrix Spike Duplicate (MS/MSD) Results
- Blank Summary and Data
- GC/MS Instrument Performance Check
- Target Compound Identification/Quantitation
- EPA/NIH Mass Spectral Library Search for TICs
- Quantitation Reports and Mass Spectral Data
- Initial and Continuing Calibration Data
- Internal Standard Areas and Retention Times
- Field Duplicate Data

The above items were in compliance with USEPA QC criteria with the exception of the items discussed in the following text. The data have been validated according to the above procedures and qualified as described on the attached definitions list.

Surrogate Recoveries

The acid surrogate 2,4,6-tribromophenol exhibited recoveries outside of QC limits (10-123%) for the field blank (sample SKNC-FB, 137%) and method blank SBLK59 (135%). The acid surrogate 2,4,6-tribromophenol also exhibited a recovery outside of QC limits (19-122%) for soil sample SKNC-01.

The base-neutral surrogate terphenyl-d14 exhibited a recovery outside of QC limits (18-137%) for soil sample SKNC-02 (144%).

No data have been qualified based upon these recoveries, however, because the Statement of Work (SOW) allows for one acid and/or base-neutral surrogate to fail to meet QC criteria. Furthermore, the elevated percent recoveries would indicate a potential high bias and the samples do not exhibit any base-neutral or acid compounds other than the diethylphthalate reported in the field blank and discussed below (see the **Blank Summary and Data** section).

Matrix Spike/Matrix Spike Duplicate (MS/MSD) Results

Sample SKNC-02 was submitted for MS/MSD analysis. Two (2) out of 22 spike recoveries were outside of QC limits, although the relative percent difference (RPD) between the MS and MSD recoveries met all QC criteria. Non-compliant low level soil MS/MSD data is summarized below.

Non-Compliant MS/MSD Data

				QC Limits	
Compound	MS %R	MSD %R	RPD	RPD	%R
4-Nitrophenol	114	120*	5	50	11-114
Pentachlorophenol	114*	80	35	47	17-109

** Indicates values outside of QC limits.*

No data have been qualified based upon this data, however, because MS/MSD data is only advisory and other data does not indicate the need for qualification of the results. Furthermore, both the 4-nitrophenol and pentachlorophenol recoveries are indicative of a potential high bias and neither 4-nitrophenol nor pentachlorophenol were reported in sample SKNC-02.

Blank Summary and Data

Method blank SBLK59 exhibited one (1) tentatively identified compound (TIC). The same TIC was also detected in the field blank (sample SKNC-FB). No data have been qualified based upon these nonconformances, however, because none of the samples exhibited the presence of this particular TIC.

Butylbenzylphthalate and bis(2-ethylhexyl)phthalate, common laboratory contaminants, were each detected at concentrations below the contract required quantitation limit (CRQL) in method blank SBLK60. Diethylphthalate, another common laboratory contaminant, was detected in the field blank (sample SKNC-FB). In accordance with EPA validation criteria, sample bis(2-ethylhexyl)phthalate results less than ten (10) times the associated blank value have been reported as non-detect at the CRQL. No data have been qualified based upon the

butylbenzylphthalate or diethylphthalate results because neither of these common phthalate were detected in any of the samples associated with these blanks.

Method blank SBLK60 exhibited twelve (12) TICs, one of which is an aldol condensation product also detected in each of the associated samples. The results reported for the aldol condensation product have been rejected and are considered to be unusable. No data have been qualified based upon the presence of the other TICs, however, because none of the samples exhibited the presence of these particular TICs. Please note that ten (10) of the TICs reported for method blank SBLK60 appear to be siloxanes, which are common column degradation products and are considered to be laboratory derived. It should also be noted that the presence of these TICs does not affect the usability of the target compounds reported.

Initial and Continuing Calibration Data

The relative response factor (RRF) for the compound 4-chlorophenyl-phenylether failed to meet the minimum RRF of 0.400 specified in the SOW for two (2) of the five (5) standards comprising the initial calibration. Although the RRF120 (0.393) and RRF160 (0.329) were low, the average RRF was acceptable (0.457). The RRF for fluorene failed to meet the minimum RRF of 0.900 specified in the SOW for the 160 ug/L standard for this initial calibration. Although the RRF160 for fluorene was low (0.744), the average RRF was acceptable (1.053). No data have been qualified based upon these nonconformances because the SOW allows for up to four (4) relative response factors to fail to meet the minimum RRF specified in the SOW and because the average RRF were acceptable. Therefore, this initial calibration is considered to be fully compliant and usable.

The percent relative standard deviation (%RSD) for bis(2-chloroethyl)ether in the initial calibration is 33.0, which exceeds the maximum %RSD of 20.5 specified in the SOW. Each of the bis(2-chloroethyl)ether results reported have been flagged with a "V" and are considered estimated. Please note, however, that the SOW allows up to four (4) compounds to exceed the specified QC limits for %RSD. Therefore, this continuing calibration is considered to be fully compliant and usable.

The %RSD for hexachlorocyclopentadiene (48.0) and 3-nitroaniline (51.5) exceed the USEPA technical criteria of 30.0%RSD. Each of the hexachlorocyclopentadiene and 3-nitroaniline results reported have been flagged with a "V" and are considered estimated.

The percent difference (%D) between the average RRF for the initial calibration and the RRF for the continuing calibration standard for the compound pentachlorophenol (30.0) exceeds the maximum %D of 25.0 specified in the SOW. Although the SOW allows for up to four (4) semivolatile compounds in a continuing calibration to fail to meet specifications, the pentachlorophenol results reported have been flagged with a "V" and are considered estimated in accordance with USEPA data validation guidelines. Please note that estimated data are considered valid and usable and that this continuing calibration is fully compliant and usable.

The percent difference (%D) between the average RRF for the initial calibration and the RRF for the continuing calibration standard for the compounds hexachlorocyclopentadiene (48.9),

2,4-dinitrophenol (48.7), 4-nitroaniline (29.2), 4,6-dinitro-2-methylphenol (40.8) and N-nitrosodiphenylamine (36.5) exceed the USEPA technical criteria of 25.0%D. The hexachlorocyclopentadiene, 2,4-dinitrophenol, 4-nitroaniline, 4,6-dinitro-2-methylphenol and N-nitrosodiphenylamine results reported have been flagged with a "V" and are considered estimated in accordance with USEPA data validation guidelines.

Field Duplicate Data

Sample SKNC-FD is a field duplicate of sample SKNC-02. No semivolatile organic target compounds were detected in either sample SKNC-02 or its field duplicate. Therefore, the field duplicate data is considered indicative of acceptable sampling and analytical precision.

Summary

In summary, based on 192 sample data points, 24 of which were qualified as estimated, and none qualified as unusable, and since estimated data are considered valid and usable, the usability of this data package is 100%.

Anthony M. Noce — Reviewed By

25 JANUARY 95 — Date

Approved By

1-27-95 — Date

Semivolatile Organic Analytical Data

Skinner Landfill Site
West Chester, Ohio

Sampling Date: December 1, 1994
Remedial Design Investigation

Sample ID / Compound	SKNC-01	SKNC-02	SKNC-FD	SKNC-FB
Phenol	410 U	460 U	450 U	10 U
bis(2-Chloroethyl)Ether	410 UV	460 UV	450 UV	10 UV
2-Chlorophenol	410 U	460 U	450 U	10 U
1,3-Dichlorobenzene	410 U	460 U	450 U	10 U
1,4-Dichlorobenzene	410 U	460 U	450 U	10 U
1,2-Dichlorobenzene	410 U	460 U	450 U	10 U
2-Methylphenol	410 U	460 U	450 U	10 U
2,2'-oxybis(1-Chloropropane)	410 U	460 U	450 U	10 U
4-Methylphenol	410 U	460 U	450 U	10 U
N-Nitroso-di-n-propylamine	410 U	460 U	450 U	10 U
Hexachloroethane	410 U	460 U	450 U	10 U
Nitrobenzene	410 U	460 U	450 U	10 U
Isophorone	410 U	460 U	450 U	10 U
2-Nitrophenol	410 U	460 U	450 U	10 U
2,4-Dimethylphenol	410 U	460 U	450 U	10 U
2,4-Dichlorophenol	410 U	460 U	450 U	10 U
1,2,4-Trichlorobenzene	410 U	460 U	450 U	10 U
Naphthalene	410 U	460 U	450 U	10 U
4-Chloroaniline	410 U	460 U	450 U	10 U
Hexachlorobutadiene	410 U	460 U	450 U	10 U
bis(2-Chloroethoxy)methane	410 U	460 U	450 U	10 U
4-Chloro-3-Methylphenol	410 U	460 U	450 U	10 U
2-Methylnaphthalene	410 U	460 U	450 U	10 U
Hexachlorocyclopentadiene	410 UV	460 UV	450 UV	10 UV
2,4,6-Trichlorophenol	410 U	460 U	450 U	10 U
2,4,5-Trichlorophenol	990 U	1100 U	1100 U	25 U
2-Chloronaphthalene	410 U	460 U	450 U	10 U
2-Nitroaniline	990 U	1100 U	1100 U	25 U
Dimethylphthalate	410 U	460 U	450 U	10 U
Acenaphthylene	410 U	460 U	450 U	10 U
2,6-Dinitrotoluene	410 U	460 U	450 U	10 U
3-Nitroaniline	990 UV	1100 UV	1100 UV	25 UV
Acenaphthene	410 U	460 U	450 U	10 U
2,4-Dinitrophenol	990 UV	1100 UV	1100 UV	25 UV
4-Nitrophenol	990 U	1100 U	1100 U	25 U
Dibenzofuran	410 U	460 U	450 U	10 U
2,4-Dinitrotoluene	410 U	460 U	450 U	10 U
Diethylphthalate	410 U	460 U	450 U	1 J
4-Chlorophenyl-phenylether	410 U	460 U	450 U	10 U
Fluorene	410 U	460 U	450 U	10 U

Semivolatile Organic Analytical Data

Skinner Landfill Site
West Chester, Ohio

Sampling Date: December 1, 1994
Remedial Design Investigation

Sample ID / Compound	SKNC-01	SKNC-02	SKNC-FD	SKNC-FB
4-Nitroaniline	990 UV	1100 UV	1100 UV	25 UV
4,6-Dinitro-2-methylphenol	990 UV	1100 UV	1100 UV	25 UV
N-Nitrosodiphenylamine	410 UV	460 UV	450 UV	10 UV
4-Bromophenyl-phenylether	410 U	460 U	450 U	10 U
Hexachlorobenzene	410 U	460 U	450 U	10 U
Pentachlorophenol	990 UV	1100 UV	1100 UV	25 UV
Phenanthrene	410 U	460 U	450 U	10 U
Anthracene	410 U	460 U	450 U	10 U
Carbazole	410 U	460 U	450 U	10 U
Di-n-butylphthalate	410 U	460 U	450 U	10 U
Fluoranthene	410 U	460 U	450 U	10 U
Pyrene	410 U	460 U	450 U	10 U
Butylbenzylphthalate	410 U	460 U	450 U	10 U
3,3'-Dichlorobenzidine	410 U	460 U	450 U	10 U
Benzo(a)anthracene	410 U	460 U	450 U	10 U
Chrysene	410 U	460 U	450 U	10 U
bis(2-Ethylhexyl)phthalate	410 U	460 U	450 U	10 U
Di-n-octylphthalate	410 U	460 U	450 U	10 U
Benzo(b)fluoranthene	410 U	460 U	450 U	10 U
Benzo(k)fluoranthene	410 U	460 U	450 U	10 U
Benzo(a)pyrene	410 U	460 U	450 U	10 U
Indeno(1,2,3-cd)pyrene	410 U	460 U	450 U	10 U
Dibenz(a,h)anthracene	410 U	460 U	450 U	10 U
Benzo(g,h,i)perylene	410 U	460 U	450 U	10 U

All results expressed in ug/Kg, except for SKNC-FB which are expressed in ug/L.
Standard Organic Data Qualifiers have been used.
Sample SKNC-FD is a field duplicate of sample SKNC-02.
Sample SKNC-FB is a field blank.

Pesticide/PCB Data Validation Summary
Skinner Landfill Site
West Chester, Ohio
Analytical Laboratory: NYTEST Environmental, Inc.
Sample Delivery Group 22661

Analytical results for two (2) soil samples with matrix QC, one (1) field duplicate and one (1) field blank from the Skinner Landfill site were reviewed to evaluate the data quality. Data were assessed in accordance with the United States Environmental Protection Agency (USEPA) **National Functional Guidelines for Organic Data Review** (Draft 12/90, Revised 6/91) and the USEPA Region II document **CLP Organics Data Review and Preliminary Review** (SOP No. HW-6, Revision No. 8, January, 1992), where applicable. This validation pertains to the following samples collected by Rust Environment & Infrastructure (RUST) personnel on December 1, 1994.

SKNC-01
SKNC-02
SKNC-02 MS
SKNC-02 MSD
SKNC-FD
SKNC-FB

The following items/criteria applicable to the samples listed above were reviewed:

- Deliverable Requirements
- Case Narrative
- Holding Times
- Surrogate Recoveries
- Matrix Spike/Matrix Spike Duplicate (MS/MSD) Results
- Method Blank Summary and Data
- Calibration and GC Performance
- Analyte Resolution Check
- Analytical Sequence
- Cleanup Efficiency
- Pesticide/PCB Identification
- Compound Quantitation and Reported Detection Limits
- Chromatogram Quality
- Field Duplicate Data

The above items were compliant with USEPA QC criteria with the exception of the items discussed in the following text. The data have been validated according to the above procedures and qualified as described on the attached definitions list.

Surrogate Recoveries

The surrogate compound tetrachloro-m-xylene (TCX) recovered outside of advisory QC limits (60-150%) on column DB-608 for sample SKNC-FB (the field blank) and for method blank PBLK09. No data have been qualified based upon this slightly low TCX recovery, however, because the TCX QC limits are only advisory and TCX recovered within QC limits

on the second analytical column, DB-1701. Furthermore, the surrogate compound decachlorobiphenyl (DCB) recovered within advisory QC limits on both columns for each of these analyses.

Matrix Spike/Matrix Spike Duplicate (MS/MSD) Results

Sample SKNC-02 was selected for MS/MSD analysis. Each of the spike compounds exhibited percent recoveries that met all QC requirements with the exception of 4,4'-DDT. The 4,4'-DDT recoveries for both the MS (137%) and the MSD (158%) were outside of QC limits (23-134%). The relative percent difference (RPD) values between the MS and MSD concentrations met all applicable QC criteria. No data have been qualified based upon the elevated 4,4'-DDT recoveries, however, because no action is taken on MS/MSD data alone and other data does not indicate the need for further qualification of the data. Furthermore, the elevated recoveries indicate a potential high bias and 4,4'-DDT was not detected in any of the associated samples.

Field Duplicate Data

Sample SKNC-FD is a field duplicate of sample SKNC-02. No pesticide/PCB target compounds were detected in either sample SKNC-02 or its field duplicate.

Summary

No reasons were found during data validation to qualify any of the pesticide/PCB results reported. In summary, based on 84 sample data points, none of which were qualified as estimated, and none qualified as unusable, the usability of this package is 100%.

Anthony M. Noce — Reviewed By — 25 JANUARY 95 — Date

Approved By — 1-27-94 — Date

Pesticide/PCB Analytical Data

Skinner Landfill Site
West Chester, Ohio

Sampling Date: December 1, 1994
Remedial Design Investigation

Sample ID / Compound	SKNC-01	SKNC-02	SKNC-FD	SKNC-FB
alpha-BHC	2.1 U	2.4 U	2.3 U	0.05 U
beta-BHC	2.1 U	2.4 U	2.3 U	0.05 U
delta-BHC	2.1 U	2.4 U	2.3 U	0.05 U
gamma-BHC (Lindane)	2.1 U	2.4 U	2.3 U	0.05 U
Heptachlor	2.1 U	2.4 U	2.3 U	0.05 U
Aldrin	2.1 U	2.4 U	2.3 U	0.05 U
Heptachlor epoxide	2.1 U	2.4 U	2.3 U	0.05 U
Endosulfan I	2.1 U	2.4 U	2.3 U	0.05 U
Dieldrin	4.1 U	4.6 U	4.5 U	0.1 U
4,4'-DDE	4.1 U	4.6 U	4.5 U	0.1 U
Endrin	4.1 U	4.6 U	4.5 U	0.1 U
Endosulfan II	4.1 U	4.6 U	4.5 U	0.1 U
4,4'-DDD	4.1 U	4.6 U	4.5 U	0.1 U
Endosulfan sulfate	4.1 U	4.6 U	4.5 U	0.1 U
4,4'-DDT	4.1 U	4.6 U	4.5 U	0.1 U
Methoxychlor	21 U	24 U	23 U	0.5 U
Endrin ketone	4.1 U	4.6 U	4.5 U	0.1 U
Endrin aldehyde	4.1 U	4.6 U	4.5 U	0.1 U
alpha-Chlordane	2.1 U	2.4 U	2.3 U	0.05 U
gamma-Chlordane	2.1 U	2.4 U	2.3 U	0.05 U
Toxaphene	210 U	240 U	230 U	5 U
Aroclor-1016	41 U	46 U	45 U	1 U
Aroclor-1221	83 U	93 U	92 U	2 U
Aroclor-1232	41 U	46 U	45 U	1 U
Aroclor-1242	41 U	46 U	45 U	1 U
Aroclor-1248	41 U	46 U	45 U	1 U
Aroclor-1254	41 U	46 U	45 U	1 U
Aroclor-1260	41 U	46 U	45 U	1 U

All results expressed in ug/Kg, except for SKNC-FB which are expressed in ug/L.
Standard Organic Data Qualifiers have been used.
Sample SKNC-FD is a field duplicate of sample SKNC-02.
Sample SKNC-FB is a field blank.

Inorganic Data Validation Summary
Skinner Landfill Site
West Chester, Ohio
Analytical Laboratory: NYTEST Environmental, Inc.
Sample Delivery Group 22661

Analytical results for two (2) soil samples with matrix QC, one (1) field duplicate and one (1) field blank from the Skinner Landfill site were reviewed to evaluate the data quality. Data were assessed in accordance with the United States Environmental Protection Agency (USEPA) **Laboratory Data Validation Functional Guidelines for Evaluating Inorganics Analysis** (October 1987 Revision) and the USEPA Region II **Checklist for Evaluation of Metals Data for the Contract Laboratory Program, Appendix A.1**, where applicable. This validation pertains to the following samples collected by Rust Environment & Infrastructure (RUST) personnel on December 1, 1994.

SKNC-01
SKNC-01 Dup
SKNC-01 Spk
SKNC-02
SKNC-FD
SKNC-FB

The following items/criteria applicable to the samples listed above were reviewed:

- Deliverable Requirements
- Case Narrative
- Holding Times and Sample Preparation
- Initial and Continuing Calibration Data
- CRDL Standards for AA and ICP
- Instrument and Preparation Blank Summary and Data
- ICP Interference Check Sample
- Spiked Sample Recovery Data
- Laboratory Duplicate Data
- Laboratory Control Samples (LCS)
- ICP Serial Dilution Data
- Graphite Furnace Atomic Absorption (GFAA) QC Analysis
- Method of Standard Addition (MSA) Results
- Verification of Instrument Parameters
- Field Duplicate Data

The above items were in compliance with USEPA QC criteria with the exception of the items discussed in the following text. The data have been validated according to the above procedures and qualified as described on the attached definitions list.

Deliverable Requirements

The laboratory improperly applied the qualifiers associated with the matrix QC for the soils to the field blank (sample SKNC-FB). This has been corrected during the data validation process.

The laboratory incorrectly reported a continuing calibration blank (CCB) value for lead which failed to meet applicable QC criteria on the Blanks summary form (Form III). A review of the raw data for lead indicates that the value for this CCB has been incorrectly reported due to a transcription error and that all of the blanks for lead, as well as each of the other analytes, meet all applicable QC criteria. The affected forms have been corrected during the data validation process.

The laboratory incorrectly reported the arsenic result for sample SKNC-FD as 31.5 S rather than 15.8 S. It appears as if the laboratory took the two fold dilution factor into account twice. A corrected Form I for this sample has been submitted upon request.

The laboratory arbitrarily set the instrument detection limit (IDL) for selenium equal to the contract required detection limit (CRDL) of 5 ug/L. The analytical spike for the initial selenium analysis of sample SKNC-02 was 47.0% (4.7 ug/L), and the selenium result reported should have been 1.3 UW. The laboratory incorrectly reported an analytical spike recovery of 0.0% for the initial selenium analysis of sample SKNC-02, however, and reanalyzed the sample at a ten fold dilution. The selenium result reported by the laboratory (12.9 UW) was taken from this reanalysis. The appropriate reporting forms have been modified during data validation to correct this error, and the nature of this nonconformance has been discussed with laboratory personnel so that it will not be repeated in the future.

Initial and Continuing Calibration Data

One of the continuing calibration verification (CCV) standards for cyanide has been reported as exhibiting a recovery of ten percent (10%). A review of the cyanide data reveals that this CCV was not recorded as a distinct peak but as part of a large, off-scale peak from a previous sample. This CCV fails to meet the applicable QC criteria and is considered unusable. No data have been qualified based upon this nonconformance, however, because none of the samples in this SDG are directly associated with this CCV.

It was noted during review of the cyanide data that on one or more occasions more than ten samples were analyzed between CCV/CCB pairs. The laboratory apparently did not consider the prep blank or laboratory control sample to count towards the ten sample limit between CCV/CCB pairs. No data have been qualified based upon this nonconformance, however, because the quality of the cyanide results was not affected. The nature of this nonconformance has been discussed with laboratory personnel so that it will not be repeated in the future.

CRDL Standard for AA and ICP

A CRDL standard must exhibit a percent recovery between 80 and 120 to be considered within QC limits. The initial CRDL standard for ICP exhibited a high percent recovery for cadmium (121.5%), while the final CRDL standard for ICP exhibited a low cadmium recovery (76.3%). The samples in this SDG are associated with the initial CRDL standard for ICP, and positive sample results for cadmium have been flagged with a "V" and are considered estimated.

Spiked Sample Recovery Data

Spiked sample analysis was performed on sample SKNC-01. Three (3) analytes exhibited percent recoveries outside of QC limits (75-125%) for the matrix spike: Antimony (23.9%), manganese (-111.2%) and selenium (65.9%). The associated antimony and selenium results have been flagged with a "V" and are considered estimated. No data has been qualified based upon the manganese spike recovery because the concentration of manganese in the sample is greater than four (4) times the spike added for manganese.

Graphite Furnace Atomic Absorption (GFAA) QC Analysis

Several GFAA analytical spike recoveries, summarized below, were outside of QC limits (85-115%). In accordance with EPA validation criteria, the affected sample results have been flagged with a "V" and are considered estimated.

Sample ID	Analyte	Percent Recovery
SKNC-01	Selenium	75.0%
SKNC-02	Selenium	47.0%
	Thallium	84.0%
SKNC-FD	Selenium	61.0%

Field Duplicate Analysis

Table 1 summarizes the RPD between sample SKNC-02 and its field duplicate, sample SKNC-FD. Although there are no established QC limits for field duplicate RPD data, RUST considers RPD values of 40% or less an indication of acceptable sampling and analytical precision. Please note that the RPD values presented in Table 1 are generally indicative of acceptable sampling and analytical precision. The aluminum and zinc results for both SKNC-02 and SKNC-FD have been flagged with a "V" and are considered estimated due to elevated RPD values. It should be noted that elevated RPD values for results below the contract required detection limit (CRDL) are not unexpected and are not considered indicative of unacceptable precision.

Table 1
RPD Calculations - Field Duplicate Analysis

Analyte	SKNC-02	SKNC-FD	RPD
Aluminum	1540	2970	63.4%
Antimony	10.2 U	9.8 U	0.0%
Arsenic	13.9	15.8	12.8%
Barium	723	654	10.0%
Beryllium	0.54 U	0.51 U	0.0%
Cadmium	0.71 B	0.82 B	14.4%
Calcium	349000	315000	10.2%
Chromium	3.8	5.5	36.6%
Cobalt	1.7 B	2.5 B	38.1%
Copper	2.7 B	2.9 B	7.1%
Iron	6250	8040	25.1%
Lead	4.5	5.5	20.0%
Magnesium	8930	8740	2.2%
Manganese	212	306	36.3%
Mercury	0.14 U	0.14 U	0.0%
Nickel	7 U	8.9 B	200.0%
Potassium	226 U	514 B	200.0%
Selenium	12.9 U	1.3 U	0.0%
Silver	1.3 U	1.3 U	0.0%
Sodium	244 B	260 B	6.3%
Thallium	1.3 U	1.3 U	0.0%
Vanadium	5.1 B	8.9 B	54.3%
Zinc	7.7	13.7	56.1%
Cyanide	0.66 U	0.7 U	0.0%

Results expressed in ug/Kg.
Standard Inorganic Data Qualifiers have been applied.

Summary

In summary, based on 72 sample data points, eleven (11) of which were qualified as estimated, and none qualified as unusable, and since estimated data are considered valid and usable, the usability of this package is 100%.

Anthony M. Noce — Reviewed By — 26 JANUARY 95 — Date

Approved By — 1/27/95 — Date

Inorganic Analytical Data

Skinner Landfill Site
West Chester, Ohio

Sampling Date: December 1, 1994
Remedial Design Investigation

Sample ID / Analyte	SKNC-01	SKNC-02	SKNC-FD	SKNC-FB
Aluminum	6380	1540 V	2970 V	57 U
Antimony	8.9 UV	10.2 U	9.8 U	38 U
Arsenic	7.4 S	13.9	15.8 S	5 U
Barium	69.1	723	654	11 U
Beryllium	0.47 U	0.54 U	0.51 U	2 U
Cadmium	0.47 U	0.71 BV	0.82 BV	2 U
Calcium	237000	349000	315000	1390 U
Chromium	7.9	3.8	5.5	5 U
Cobalt	5.5 B	1.7 B	2.5 B	6 U
Copper	10.8	2.7 B	2.9 B	5 U
Iron	15900	6250	8040	16 U
Lead	13.8	4.5	5.5	3 U
Magnesium	7610	8930	8740	1550 U
Manganese	1240	212	306	2 U
Mercury	0.12 U	0.14 U	0.14 U	0.2 U
Nickel	12.8	7 U	8.9 B	26 U
Potassium	1000 B	226 U	514 B	840 U
Selenium	1.2 UV	1.3 UV	1.3 UV	5 U
Silver	1.2 U	1.3 U	1.3 U	5 U
Sodium	132 B	244 B	260 B	463 U
Thallium	1.2 U	1.3 UV	1.3 U	5 U
Vanadium	15.8	5.1 B	8.9 B	17 U
Zinc	36.6	7.7 V	13.7 V	5 U
Cyanide	0.6 U	0.66 U	0.7 U	10 U

All results expressed in mg/Kg, except for SKNC-FB which are expressed in ug/L.
Standard Inorganic Data Qualifiers have been used.
Sample SKNC-FD is a field duplicate of sample SKNC-02.
Sample SKNC-FB is a field blank.

APPENDIX VII

VOLUME ESTIMATE CALCULATIONS

RUST ENVIRONMENT & INFRASTRUCTURE

CALCULATION SHEET

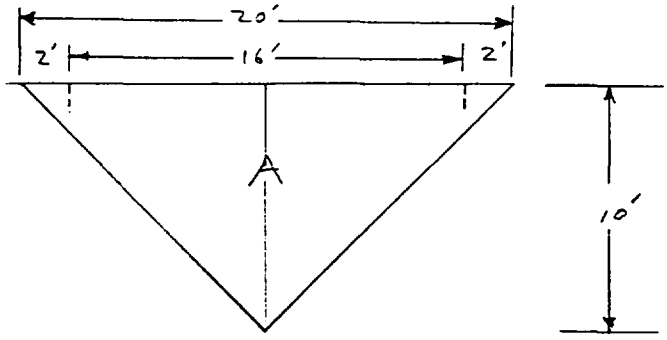
PAGE 1 OF 1
PROJECT NO. 72680.300

CLIENT Skinner PRP
PROJECT CSDI Buried Pit Area

SUBJECT Earth Work Calculations BP01 / BP02

Prepared By RFR Date 5-24-95
Reviewed By ____ Date ____
Approved By ____ Date ____

Contaminated Soil Area BP01 & BP02



$$\text{Area } A = \frac{\text{base} \times \text{height}}{2}$$

$$= \frac{20' \times 10'}{2} = 100 \text{ S.F.}$$

$$\text{Volume} = \text{Area } A \times \text{Length}$$

$$= 100 \text{ SF} \times 135'$$

$$= \frac{13,500 \text{ CF}}{27} = \boxed{500 \text{ C.Y.}}$$

RUST ENVIRONMENT & INFRASTRUCTURE

CALCULATION SHEET

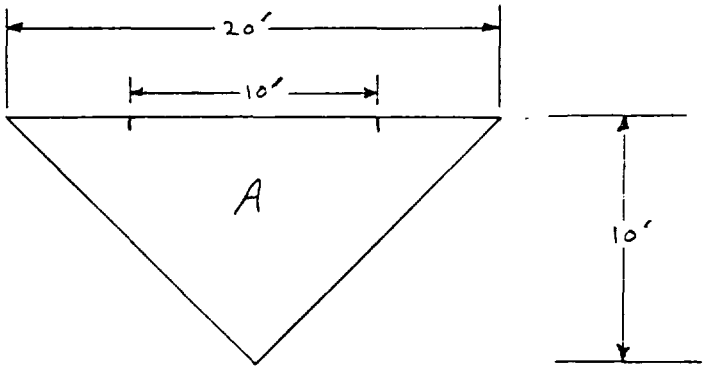
PAGE 1 OF 1
PROJECT NO. 72620.300

CLIENT Skinner PRP
PROJECT CSAI

SUBJECT Earth Work calculations Area GW-38

Prepared By RFR Date 5-24-95
Reviewed By _____ Date _____
Approved By _____ Date _____

Contaminated Soil Area GW-38



$$\text{Area } A = \frac{\text{base} \times \text{height}}{2}$$

$$= \frac{20' \times 10'}{2} = 100 \text{ SF}$$

$$\text{Volume} = \text{Area } A \times \text{Length}$$

$$= 100 \text{ SF} \times 40'$$

$$= \frac{4{,}000 \text{ CF}}{27} = \boxed{148 \text{ C.Y.}}$$